SEQUENCE LISTING

<110> Wang, Tongtong
Peckham, David W.
Retter, Marc W.
Fanger, Gary R.

<120> COMPOSITIONS AND METHODS FOR THE THERAPY
AND DIAGNOSIS OF LUNG CANCER

<130> 210121.455C20

<140> US
<141> 2003-07-17

<160> 560

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<210> 1
<211> 315
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 236, 241
<223> n = A,T,C or G

<400> 1
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cagctgccgt gagactcccg atgtcacagg cagtctgtgt ggttacagcg cccctcagtg 120
ttcatctcca gcagagacaa cggaggaggc tcccaccagg acggttctca ttatttatat 180
gttaatatgt ttgtaaactc atgtacagtt ttttttgggg gggaagcaat gggaanggta 240
naaattacaa atagaatcat ttgctgtaat ccttaaatgg caaacggtca ggccacgtga 300
aaaaaaaaaa aaaaa 315

<210> 2
<211> 380
<212> DNA
<213> Homo sapiens

<400> 2
atttaggctt aagattttgt ttacccttgt tactaaggag caaattagta ttaaagtata 60
atatatataa acaaatacaa aaagttttga gtggttcagc ttttttattt tttttaatgg 120
cataactttt aacaacactg ctctgtaatg ggttgaactg tggtactcag actgagataa 180
ctgaaatgag tggatgtata gtgttattgc ataattatcc cactatgaag caaagggact 240
ggataaattc ccagtctaga ttattagcct ttgttaacca tcaagcacct agaagaagaa 300
ttattggaaa ttttgtcctc tgtaactggc actttggggt gtgacttatc ttttgccttt 360
gtaaaaaaaa aaaaaaaaaa 380

<210> 3
<211> 346
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 316, 317, 318, 322, 323, 326, 329, 330, 331, 336, 337, 339,
340, 342, 343
<223> n = A,T,C or G

<400> 3
ttgtaagtat acaattttag aaaggattaa atgttattga tcattttact gaatactgca 60
catcctcacc atacaccatc cactttccaa taacatttaa tcctttctaa aattgtaagt 120
atacaattgt actttctttg gattttcata acaaatatac catagactgt taattttatt 180
gaagtttcct taatggaatg agtcattttt gtcttgtgct tttgaggtta cctttgcttt 240
gacttccaac aatttgatca tatagtgttg agctgtggaa atctttaagt ttattctata 300
gcaataattt ctattnnnag annccnggnn naaaannann annaaa 346

<210> 4
<211> 372
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 297, 306, 332
<223> n = A,T,C or G

<400> 4
actagtctca ttactccaga attatgctct tgtacctgtg tggctgggtt tcttagtcgt 60
tggtttggtt tggttttttg aactggtatg tagggtggtt cacagttcta atgtaagcac 120
tctcttctcc aagttgtgct ttgtggggac aatcattctt tgaacattag agaggaaggc 180
agttcaagct gttgaaaaga ctattgctta tttttgtttt taaagaccta cttgacgtca 240
tgtggacagt gcacgtgcct tacgctacat cttgttttct aggaagaagg ggatgcnggg 300
aaggantggg tgctttgtga tggataaaac gnctaaataa cacaccttta cattttgaaa 360
aaaacaaaac aa 372

<210> 5
<211> 698
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 8, 345, 422, 430, 433, 436, 438, 472, 481, 486, 515, 521,
536, 549, 553, 556, 557, 559, 568, 593, 597, 605, 611, 613,
616, 618, 620, 628, 630, 632, 634, 635, 639, 643, 647, 648,
649, 652, 654, 658, 664, 690
<223> n = A,T,C or G

<400> 5
actagtanga tagaaacact gtgtcccgag agtaaggaga gaagctacta ttgattagag 60

cctaacccag gttaactgca agaagaggcg ggatactttc agctttccat gtaactgtat 120
gcataaagcc aatgtagtcc agtttctaag atcatgttcc aagctaactg aatcccactt 180
caatacacac tcatgaactc ctgatggaac aataacaggc ccaagcctgt ggtatgatgt 240
gcacacttgc tagactcaga aaaaatacta ctctcataaa tgggtgggag tattttgggt 300
gacaacctac tttgcttggc tgagtgaagg aatgatattc atatnttcat ttattccatg 360
gacatttagt tagtgctttt tatataccag gcatgatgct gagtgacact cttgtgtata 420
tntccaaatn ttngtncngt cgctgcacat atctgaaatc ctatattaag antttcccaa 480
natgangtcc ctggtttttc cacgccactt gatcngtcaa ngatctcacc tctgtntgtc 540
ctaaaaccnt ctnctnnang gttagacngg acctctcttc tcccttcccg aanaatnaag 600
tgtgngaaga nanccncncn ccccccctncn tncnncctng ccngctnnnc cncntgtngg 660
gggngccgcc cccgcggggg gacccccccn ttttcccc 698

<210> 6
<211> 740
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 82, 406, 426, 434, 462, 536, 551, 558, 563, 567, 582, 584,
592, 638, 651, 660, 664, 673, 675, 697, 706, 711, 715, 716,
717, 723, 724, 725, 733
<223> n = A,T,C or G

<400> 6
actagtcaaa aatgctaaaa taatttggga gaaaatattt tttaagtagt gttatagttt 60
catgtttatc ttttattatg tnttgtgaag ttgtgtcttt tcactaatta cctatactat 120
gccaatattt ccttatatct atccataaca tttatactac atttgtaaga gaatatgcac 180
gtgaaactta acactttata aggtaaaaat gaggtttcca agatttaata atctgatcaa 240
gttcttgtta tttccaaata gaatggactt ggtctgttaa ggggctaagg gagaagaaga 300
agataaggtt aaaagttgtt aatgaccaaa cattctaaaa gaaatgcaaa aaaaaattta 360
ttttcaagcc ttcgaactat ttaaggaaag caaaatcatt tcctanatgc atatcatttg 420
tgaganttte tcantaatat cctgaatcat tcatttcagc tnaggcttca tgttgactcg 480
atatgtcatc tagggaaagt ctatttcatg gtccaaacct gttgccatag ttggtnaggc 540
tttcctttaa ntgtgaanta ttnacangaa attttctctt tnanagttct tnatagggtt 600
aggggtgtgg gaaaagcttc taacaatctg tagtgttncg tgttatctgt ncagaaccan 660
aatnacggat cgnangaagg actgggtcta tttacangaa cgaatnatct ngttnnntgt 720
gtnnncaact ccngggagcc 740

<210> 7
<211> 670
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 265, 268, 457, 470, 485, 546, 553, 566, 590, 596, 613, 624,
639, 653, 659, 661
<223> n = A,T,C or G

<400> 7
gctggggagc tcggcatggc ggtccccgct gcagccatgg ggccctcggc gttgggccag 60
agcggccccg gctcgatggc cccgtggtgc tcagtgagca gcggcccgtc gcgctacgtg 120
cttgggatgc aggagctgtt ccggggccac agcaagaccg cgagttcctg gcgcacagcg 180

ccaaggtgca ctcggtggcc tggagttgcg acgggcgtcg cctacctcgg ggtcttcgac 240
aagacgccac gtcttcttgc tgganaanga ccgttggtca aagaaaacaa ttatcgggga 300
catggggata gtgtggacca ctttgttggc atccaagtaa tcctgaccta tttgttacgg 360
cgtctggaga taaaaccatt cgcatctggg atgtgaggac tacaaaatgc attgccactg 420
tgaacactaa aggggagaac attaatatct gctggantcc tgatgggcan accattgctg 480
tagcnacaag gatgatgtgg tgactttatt gatgccaaga aaccccgttc caaagcaaaa 540
aaacanttcc aanttcgaag tcaccnaaat ctcctggaac aatgaacatn aatatnttct 600
tcctgacaat ggnccttggg tgtntcacat cctcagctnc cccaaaactg aancctgtnc 660
natccacccc 670

<210> 8
<211> 689
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 253, 335, 410, 428, 448, 458, 466, 479, 480, 482, 483, 485,
488, 491, 492, 495, 499, 500, 502, 503, 512, 516, 524, 525,
526, 527, 530, 540, 546, 550, 581, 593, 594, 601, 606, 609,
610, 620, 621, 622, 628, 641, 646, 656, 673
<223> n = A,T,C or G

<400> 8
actagtatct aggaatgaac agtaaaagag gagcagttgg ctacttgatt acaacagagt 60
aaatgaagta ctggatttgg gaaaacctgg ttttattaga acatatggaa tgaaagccta 120
cacctagcat tgcctactta gccccctgaa ttaacagagc ccaattgaga caaacccctg 180
gcaacaggaa attcaaggga gaaaaagtaa gcaacttggg ctaggatgag ctgactccct 240
tagagcaaag ganagacagc ccccattacc aaataccatt tttgcctggg gcttgtgcag 300
ctggcagtgt tcctgcccca gcatggcacc ttatngtttt gatagcaact tcgttgaatt 360
ttcaccaact tattacttga aattataata tagcctgtcc gtttgctgtn tccaggctgt 420
gatatatntt cctagtggtt tgactttnaa aataaatnag gtttantttt ctccccccnn 480
cnntnctncc nntcnctcnn cnntcccccc cnctcngtcc tccnnnnttn gggggggccn 540
cccccncggn ggaccccccc ttggtccctt agtggaggtt natggcccct ggnnttatcc 600
nggccntann tttccccgtn nnaaatgntt ccccctccca ntcccnccac ctcaanccgg 660
aagcctaagt ttntaccctg ggggtcccc 689

<210> 9
<211> 674
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 602, 632, 639, 668
<223> n = A,T,C or G

<400> 9
gtccactctc ctttgagtgt actgtcttac tgtgcactct gtttttcaac tttctagata 60
taaaaaatgc ttgttctata gtggagtaag agctcacaca cccaaggcag caagataact 120
gaaaaaagcg aggctttttt gccaccttgg taaaggccag ttcactgcta tagaactgct 180
ataagcctga agggaagtag ctatgagact ttccattttt cttagttctc ccaataggct 240
ccttcatgga aaaaggcttc ctgtaataat tttcacctaa tgaattagca gtgtgattat 300
ttctgaaata agagacaaat tgggccgcag agtcttcctg tgatttaaaa taaacaaccc 360

aaagttttgt ttggtcttca ccaaaggaca tactctaggg ggtatgttgt tgaagacatt 420
caaaaacatt agctgttctg tctttcaatt tcaagttatt ttggagactg cctccatgtg 480
agttaattac tttgctctgg aactagcatt attgtcatta tcatcacatt ctgtcatcat 540
catctgaata atattgtgga tttccccctc tgcttgcatc ttcttttgac tcctctggga 600
anaaatgtca aaaaaaaagg tcgatctact cngcaaggnc catctaatca ctgcgctgga 660
aggacccnct gccc 674

<210> 10
<211> 346
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 320, 321, 322, 325, 326, 328, 329, 330, 332, 333, 334, 335,
342
<223> n = A,T,C or G

<400> 10
actagtctgc tgatagaaag cactatacat cctattgttt ctttctttcc aaaatcagcc 60
ttctgtctgt aacaaaaatg tactttatag agatggagga aaaggtctaa tactacatag 120
ccttaagtgt ttctgtcatt gttcaagtgt attttctgta acagaaacat atttggaatg 180
ttttttcttt ccccttataa attgtaattc ctgaaatact gctgctttaa aaagtcccac 240
tgtcagatta tattatctaa caattgaata ttgtaaatat acttgtctta cctctcaata 300
aaagggtact tttctattan nnagnngnnn gnnnnataaa anaaaa 346

<210> 11
<211> 602
<212> DNA
<213> Homo sapiens

<400> 11
actagtaaaa agcagcattg ccaaataatc cctaattttc cactaaaaat ataatgaaat 60
gatgttaagc tttttgaaaa gtttaggtta aacctactgt tgttagatta atgtatttgt 120
tgcttcccct tatctggaat gtggcattag ctttttttatt ttaaccctct ttaattctta 180
ttcaattcca tgacttaagg ttggagagct aaacactggg atttttggat aacagactga 240
cagttttgca taattataat cggcattgta catagaaagg atatggctac cttttgttaa 300
atctgcactt tctaaatatc aaaaaaggga aatgaagtta taaatcaatt tttgtataat 360
ctgtttgaaa catgagtttt atttgcttaa tattagggct ttgccccttt tctgtaagtc 420
tcttgggatc ctgtgtagaa ctgttctcat taaacaccaa acagttaagt ccattctctg 480
gtactagcta caaattcggt ttcatattct acttaacaat ttaaataaac tgaaatattt 540
ctagatggtc tacttctgtt catataaaaa caaaacttga tttccaaaaa aaaaaaaaaa 600
aa 602

<210> 12
<211> 685
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 170, 279, 318, 321, 322, 422, 450, 453, 459, 467, 468, 470,
473, 475, 482, 485, 486, 491, 498, 503, 506, 509, 522, 526,
527, 528, 538, 542, 544, 551, 567, 568, 569, 574, 576, 582,

587, 588, 589, 590, 592, 593, 598, 599, 603, 605, 608
<223> n = A,T,C or G

<221> misc_feature
<222> 633, 634, 635, 644, 646, 648, 651, 655, 660, 662, 663, 672,
674, 675, 682, 683
<223> n = A,T,C or G

<400> 12
actagtcctg tgaaagtaca actgaaggca gaaagtgtta ggattttgca tctaatgttc 60
attatcatgg tattgatgga cctaagaaaa taaaaattag actaagcccc caaataagct 120
gcatgcattt gtaacatgat tagtagattt gaatatatag atgtagtatn ttgggtatct 180
aggtgtttta tcattatgta aaggaattaa agtaaaggac tttgtagttg tttttattaa 240
atatgcatat agtagagtgc aaaaatatag caaaaatana aactaaaggt agaaaagcat 300
tttagatatg ccttaatnta nnaactgtgc caggtggccc tcggaataga tgccaggcag 360
agaccagtgc ctgggtggtg cctccccttg tctgcccccc tgaagaactt ccctcacgtg 420
angtagtgcc ctcgtaggtg tcacgtggan tantggganc aggccgnncn gtnanaagaa 480
ancanngtga nagtttcncc gtngangcng aactgtccct gngccnnnac gctcccanaa 540
cntntccaat ngacaatcga gtttccnnnc tccngnaacc tngccgnnnn cnngcccnnc 600
cantntgnta accccgcgcc cggatcgctc tcnnntcgtt ctcncncnaa ngggntttcn 660
cnnccgccgt cncnnccccg cnncc 685

<210> 13
<211> 694
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 503, 546, 599, 611, 636, 641, 643, 645, 656, 658, 662, 676,
679, 687
<223> n = A,T,C or G

<400> 13
cactagtcac tcattagcgt tttcaatagg gctcttaagt ccagtagatt acgggtagtc 60
agttgacgaa gatctggttt acaagaacta attaaatgtt tcattgcatt tttgtaagaa 120
cagaataatt ttataaaatg tttgtagttt ataattgccg aaaataattt aaagacactt 180
tttctctgtg tgtgcaaatg tgtgtttgtg atccattttt ttttttttt taggacacct 240
gtttactagc tagctttaca atatgccaaa aaaggatttc tccctgaccc catccgtggt 300
tcaccctctt ttccccccat gctttttgcc ctagtttata acaaaggaat gatgatgatt 360
taaaaagtag ttctgtatct tcagtatctt ggtcttccag aaccctctgg ttgggaaggg 420
gatcattttt tactggtcat ttccctttgg agtgtactac tttaacagat ggaaagaact 480
cattggccat ggaaacagcc gangtgttgg gagccagcag tgcatggcac cgtccggcat 540
ctggcntgat tggtctggct gccgtcattg tcagcacagt gccatgggac atggggaana 600
ctgactgcac ngccaatggt tttcatgaag aatacngcat ncncngtgat cacgtnancc 660
angacgctat gggggncana gggccanttg cttc 694

<210> 14
<211> 679
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature

<222> 29, 68, 83, 87, 94, 104, 117, 142, 145, 151, 187, 201, 211,
226, 229, 239, 241, 245, 252, 255, 259, 303, 309, 359, 387,
400, 441, 446, 461, 492, 504, 505, 512, 525, 527, 533, 574,
592, 609, 610, 618, 620, 626, 627, 633, 639, 645, 654
<223> n = A,T,C or G

<400> 14
cagccgcctg catctgtatc cagcgccang tcccgccagt cccagctgcg cgcgcccccc 60
agtcccgnac ccgttcggcc cangctnagt tagncctcac catnccggtc aaaggangca 120
ccaagtgcat caaatacctg cngtncggat ntaaattcat cttctggctt gccgggattg 180
ctgtccntgc cattggacta nggctccgat ncgactctca gaccanganc atcttcganc 240
naganactaa tnatnattnt tccagcttct acacaggagt ctatattctg atcggatccg 300
gcnccctcnt gatgctggtg ggcttcctga gctgctgcgg ggctgtgcaa gagtcccant 360
gcatgctggg actgttcttc ggcttcntct tggtgatatn cgccattgaa atacctgcgg 420
ccatctgggg atattccact ncgatnatgt gattaaggaa ntccacggag ttttacaagg 480
acacgtacaa cnacctgaaa accnnggatg ancccccaccg ggaancnctg aangccatcc 540
actatgcgtt gaactgcaat ggtttggctg gggnccttga acaatttaat cncatacatc 600
tggccccann aaaggacntn ctcganncct tcnccgtgna attcngttct gatnccatca 660
cagaagtctc gaacaatcc 679

<210> 15
<211> 695
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 105, 172, 176, 179, 189, 203, 212, 219, 221, 229, 231, 238,
242, 261, 266, 270, 278, 285, 286, 298, 311, 324, 337, 350,
363, 384, 391, 395, 405, 411, 424, 427, 443, 448, 453, 455,
458, 463, 467, 470, 479, 482, 484, 493, 499, 505, 518
<223> n = A,T,C or G

<221> misc_feature
<222> 520, 523, 531, 540, 584, 595, 597, 609, 611, 626, 628, 651,
652, 657, 661, 665, 669, 672, 681, 683, 691, 693
<223> n = A,T,C or G

<400> 15
actagtggat aaaggccagg gatgctgctc aacctcctac catgtacagg gacgtctccc 60
cattacaact acccaatccg aagtgtcaac tgtgtcagga ctaanaaacc ctggttttga 120
ttaaaaaagg gcctgaaaaa aggggagcca caaatctgtc tgcttcctca cnttantcnt 180
tggcaaatna gcattctgtc tcnttggctg cngcctcanc ncaaaaaanc ngaactcnat 240
cnggcccagg aatacatctc ncaatnaacn aaattganca aggcnntggg aaatgccnga 300
tgggattatc ntccgcttgt tgancttcta agtttcnttc ccttcattcn accctgccag 360
ccnagttctg ttagaaaaat gccngaattc naacnccggt tttcntactc ngaatttaga 420
tctncanaaa cttcctggcc acnattcnaa ttnanggnca cgnacanatn ccttccatna 480
ancncacccc acntttgana gccangacaa tgactgcntn aantgaaggc ntgaaggaan 540
aactttgaaa ggaaaaaaaa ctttgtttcc ggccccttcc aacncttctg tgttnancac 600
tgccttctng naaccctgga agcccngnga cagtgttaca tgttgttcta nnaaacngac 660
ncttnaatnt cnatcttccc nanaacgatt ncncc 695

<210> 16
<211> 669

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 299, 354, 483, 555, 571, 573, 577, 642, 651, 662, 667
<223> n = A,T,C or G

<400> 16
cgccgaagca gcagcgcagg ttgtccccgt ttcccctccc ccttcccttc tccggttgcc 60
ttcccgggcc ccttacactc cacagtcccg gtcccgccat gtcccagaaa caagaagaag 120
agaaccctgc ggaggagacc ggcgaggaga agcaggacac gcaggagaaa gaaggtattc 180
tgcctgagag agctgaagag gcaaagctaa aggccaaata cccaagccta ggacaaaagc 240
ctggaggctc cgacttcctc atgaagagac tccagaaagg gcaaaagtac tttgactcng 300
gagactacaa catggccaaa gccaacatga agaataagca gctgccaagt gcangaccag 360
acaagaacct ggtgactggt gatcacatcc ccaccccaca ggatctgccc agagaaagtc 420
ctcgctcgtc accagcaagc ttgcgggtgg ccaagttgaa tgatgctgcc ggggctctgc 480
canatctgag acgcttccct ccctgcccca cccgggtcct gtgctggctc ctgcccttcc 540
tgcttttgca gccangggtc aggaagtggc ncnggtngtg gctggaaagc aaaacccttt 600
cctgttggtg tcccacccat ggagcccctg gggcgagccc angaacttga nccttttttgt 660
tntcttncc 669

<210> 17
<211> 697
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 33, 48, 50, 55, 59, 60, 76, 77, 78, 90, 113, 118, 130, 135,
141, 143, 150, 156, 166, 167, 170, 172, 180, 181, 190, 192,
194, 199, 201, 209, 212, 224, 225, 226, 230, 233, 234, 236,
242, 244, 251, 253, 256, 268, 297, 305, 308, 311, 314
<223> n = A,T,C or G

<221> misc_feature
<222> 315, 317, 322, 324, 327, 333, 337, 343, 362, 364, 367, 368,
373, 384, 388, 394, 406, 411, 413, 423, 429, 438, 449, 450,
473, 476, 479, 489, 491, 494, 499, 505, 507, 508, 522, 523,
527, 530, 533, 535, 538, 539, 545, 548, 550, 552, 555
<223> n = A,T,C or G

<221> misc_feature
<222> 562, 563, 566, 568, 572, 577, 578, 580, 581, 591, 594, 622,
628, 632, 638, 642, 644, 653, 658, 662, 663, 665, 669, 675,
680, 686, 689
<223> n = A,T,C or G

<400> 17
gcaagatatg gacaactaag tgagaaggta atnctctact gctctagntn ctccnggcnn 60
gacgcgctga ggagannnac gctggcccan ctgccggcca cacacgggga tcntggtnat 120
gcctgcccan gggancccca ncnctcggan cccatntcac acccgnnccn tncgcccacn 180
ncctggctcn cncngcccng nccagctcnc gnccccctcc gccnnnctcn ttnncntctc 240
cncnccctcc ncnacnacct cctacccncg gctccctccc cagccccccc ccgcaancct 300

ccacnacncc ntcnncncga ancnccnctc gcnctcngcc ccngccccct gccccccgcc 360
cncnacnncg cgntcccccg cgcncgcngc ctcncccccc cccacnacag ncncacccgc 420
agncacgcnc tccgcccnct gacgccccnn cccgccgcgc tcaccttcat ggnccnacng 480
ccccgctcnc nccnctgcnc gccgncnngg cgccccgccc cnnccgngtn ccncncgnng 540
ccccngcngn angcngtgcg cnncangncc gngccgnncn ncaccctccg nccnccgccc 600
cgcccgctgg gggctcccgc cncgcggntc antccccncc cntncgccca ctntccgntc 660
cnncnctcnc gctcngcgcn cgcccncccc ccccccc 697

<210> 18
<211> 670
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 234, 292, 329, 437, 458, 478, 487, 524, 542, 549, 550, 557,
576, 597, 603, 604, 646, 665
<223> n = A,T,C or G

<400> 18
ctcgtgtgaa gggtgcagta cctaagccgg agcggggtag aggcgggccg gcacccccctt 60
ctgacctcca gtgccgccgg cctcaagatc agacatggcc cagaacttga acgacttggc 120
gggacggctg cccgccgggc cccggggcat gggcacggcc ctgaagctgt tgctgggggc 180
cggcgccgtg gcctacggtg tgcgcgaatc tgtgttcacc gtggaaggcg ggcncagagc 240
catcttcttc aatcggatcg gtggagtgca caggacacta tcctgggccg anggccttca 300
cttcaggatc cttggttcca gtaccccanc atctatgaca ttcgggccag acctcgaaaa 360
aatctcctcc ctacaggctc caaagaccta cagatggtga atatctccct gcgagtgttg 420
tctcgaccaa tgctcangaa cttcctaaca tgttccancg cctaagggct ggactacnaa 480
gaacgantgt tgccgtccat tgtcacgaag tgctcaagaa tttnggtggc caagttcaat 540
gncctcacnn ctgatcnccc agcggggcca agttancccct ggttgatccc cgggganctg 600
acnnaaaagg gccaaggact tcccctcatc ctggataatg tggccntcac aaagctcaac 660
tttanccacc 670

<210> 19
<211> 606
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 506
<223> n = A,T,C or G

<400> 19
actagtgcca acctcagctc ccaggccagt tctctgaatg tcgaggagtt ccaggatctc 60
tggcctcagt tgtccttggt tattgatggg ggacaaattg gggatggcca gagccccgag 120
tgtcgccttg gctcaactgt ggttgatttg tctgtgcccg gaaagtttgg catcattcgt 180
ccaggctgtg ccctggaaag tactacagcc atcctccaac agaagtacgg actgctcccc 240
tcacatgcgt cctacctgtg aaactctggg aagcaggaag gcccaagacc tggtgctgga 300
tactatgtgt ctgtccactg acgactgtca aggcctcatt tgcagaggcc accggagcta 360
gggcactagc ctgactttta aggcagtgtg tctttctgag cactgtagac caagcccttg 420
gagctgctgg tttagccttg cacctgggga aaggatgtat ttatttgtat tttcatatat 480
cagccaaaag ctgaatggaa aagttnagaa cattcctagg tggccttatt ctaataagtt 540
tcttctgtct gttttgtttt tcaattgaaa agttattaaa taacagattt agaatctagt 600

gagacc 606

<210> 20
<211> 449
<212> DNA
<213> Homo sapiens

<400> 20
actagtaaac aacagcagca gaaacatcag tatcagcagc gtcgccagca ggagaatatg 60
cagcgccaga gccgaggaga acccccgctc cctgaggagg acctgtccaa actcttcaaa 120
ccaccacagc cgcctgccag gatggactcg ctgctcattg caggccagat aaacacttac 180
tgccagaaca tcaaggagtt cactgcccaa aacttaggca agctcttcat ggcccaggct 240
cttcaagaat acaacaacta agaaaaggaa gtttccagaa aagaagttaa catgaactct 300
tgaagtcaca ccagggcaac tcttggaaga aatatatttg catattgaaa agcacagagg 360
atttctttag tgtcattgcc gattttggct ataacagtgt ctttctagcc ataataaaat 420
aaaacaaaat cttgactgct tgctcaaaa 449

<210> 21
<211> 409
<212> DNA
<213> Homo sapiens

<400> 21
tatcaatcaa ctggtgaata attaaacaat gtgtggtgtg atcatacaaa gggtaccact 60
caatgataaa aggaacaagc tgcctatatg tggaacaaca tggatgcatt tcagaaactt 120
tatgttgagt gaaagaacaa acacggagaa catactatgt ggttctcttt atgtaacatt 180
acagaaataa aaacagaggc aaccaccttt gaggcagtat ggagtgagat agactggaaa 240
aaggaaggaa ggaaactcta cgctgatgga aatgtctgtg tcttcattgg gtggtagtta 300
tgtggggata tacatttgtc aaaatttatt gaactatata ctaaagaact ctgcatttta 360
ttgggatgta aataatacct caattaaaaa gacaaaaaaa aaaaaaaaa 409

<210> 22
<211> 649
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 263, 353, 610, 635, 646
<223> n = A,T,C or G

<400> 22
acaattttca ttatcttaag cacattgtac atttctacag aacctgtgat tattctcgca 60
tgataaggat ggtacttgca tatggtgaat tactactgtt gacagtttcc gcagaaatcc 120
tatttcagtg gaccaacatt gtggcatggc agcaaatgcc aacattttgt ggaatagcag 180
caaatctaca agagaccctg gttggttttt cgttttgttt tctttgtttt ttccccttc 240
tcctgaatca gcagggatgg aangagggta gggaagttat gaattactcc ttccagtagt 300
agctctgaag tgtcacattt aatatcagtt ttttttaaac atgattctag ttnaatgtag 360
aagagagaag aaagaggaag tgttcacttt tttaatacac tgatttagaa atttgatgtc 420
ttatatcagt agttctgagg tattgatagc ttgctttatt tctgccttta cgttgacagt 480
gttgaagcag ggtgaataac taggggcata tatatttttt ttttttgtaa gctgtttcat 540
gatgttttct ttggaatttc cggataagtt caggaaaaca tctgcatgtt gttatctagt 600
ctgaagttcn tatccatctc attacaacaa aaacncccag aacggnttg 649

<210> 23
<211> 669
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 642, 661
<223> n = A,T,C or G

<400> 23
actagtgccg tactggctga aatccctgca ggaccaggaa gagaaccagt tcagactttg 60
tactctcagt caccagctct ggaattagat aaattccttg aagatgtcag gaatgggatc 120
tatcctctga cagcctttgg gctgcctcgg ccccagcagc cacagcagga ggaggtgaca 180
tcacctgtcg tgccccctc tgtcaagact ccgacacctg aaccagctga ggtggagact 240
cgcaaggtgg tgctgatgca gtgcaacatt gagtcggtgg aggagggagt caaacaccac 300
ctgacacttc tgctgaagtt ggaggacaaa ctgaaccggc acctgagctg tgacctgatg 360
ccaaatgaga atatccccga gttggcggct gagctggtgc agctgggctt cattagtgag 420
gctgaccaga gccggttgac ttctctgcta gaagagactt gaacaagttc aattttgcca 480
ggaacagtac cctcaactca gccgctgtca ccgtctcctc ttagagctca ctcgggccag 540
gccctgatct gcgctgtggc tgtcctggac gtgctgcacc ctctgtcctt ccccccagtc 600
agtattacct gtgaagccct tccctccttt attattcagg anggctgggg gggctccttg 660
nttctaacc 669

<210> 24
<211> 442
<212> DNA
<213> Homo sapiens

<400> 24
actagtacca tcttgacaga ggatacatgc tcccaaaacg tttgttacca cacttaaaaa 60
tcactgccat cattaagcat cagtttcaaa attatagcca ttcatgattt acttttcca 120
gatgactatc attattctag tcctttgaat ttgtaagggg aaaaaaaaca aaaacaaaaa 180
cttacgatgc acttttctcc agcacatcag atttcaaatt gaaaattaaa gacatgctat 240
ggtaatgcac ttgctagtac tacacacttt ggtacaacaa aaaacagagg caagaaacaa 300
cggaaagaga aaagccttcc tttgttggcc cttaaactga gtcaagatct gaaatgtaga 360
gatgatctct gacgatacct gtatgttctt attgtgtaaa taaaattgct ggtatgaaat 420
gacctaaaaa aaaaaaaaga aa 442

<210> 25
<211> 656
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 330, 342, 418, 548, 579, 608
<223> n = A,T,C or G

<400> 25
tgcaagtacc acacactgtt tgaattttgc acaaaaagtg actgtaggat caggtgatag 60
ccccggaatg tacagtgtct tggtgcacca agatgccttc taaaggctga cataccttgg 120
accctaatgg ggcagagagt atagccctag cccagtggtg acatgaccac tccctttggg 180
aggcctgagg tagaggggag tggtatgtgt tttctcagtg gaagcagcac atgagtgggt 240

gacaggatgt tagataaagg ctctagttag ggtgtcattg tcatttgaga gactgacaca 300
ctcctagcag ctggtaaagg ggtgctggan gccatggagg anctctagaa acattagcat 360
gggctgatct gattacttcc tggcatcccg ctcactttta tgggaagtct tattagangg 420
atgggacagt tttccatatc cttgctgtgg agctctggaa cactctctaa atttcctct 480
attaaaaatc actgccctaa ctacacttcc tccttgaagg aatagaaatg gaactttctc 540
tgacatantt cttggcatgg ggagccagcc acaaatgana atctgaacgt gtccaggttt 600
ctcctganac tcatctacat agaattggtt aaaccctccc ttggaataag gaaaaa 656

<210> 26
<211> 434
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 395
<223> n = A,T,C or G

<400> 26
actagttcag actgccacgc caaccccaga aaatacccca catgccagaa aagtgaagtc 60
ctaggtgttt ccatctatgt ttcaatctgt ccatctacca ggcctcgcga taaaaacaaa 120
acaaaaaaac gctgccaggt tttagaagca gttctggtct caaaaccatc aggatcctgc 180
caccagggtt cttttgaaat agtaccacat gtaaaaggga atttggcttt cacttcatct 240
aataactgaa ttgtcaggct ttgattgata attgtagaaa taagtagcct tctgttgtgg 300
gaataagtta taatcagtat tcatctcttt gttttttgtc actcttttct ctctaattgt 360
gtcatttgta ctgtttgaaa aatatttctt ctatnaaatt aaactaacct gccttaaaaa 420
aaaaaaaaaa aaaa 434

<210> 27
<211> 654
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 505, 533, 563, 592, 613, 635, 638
<223> n = A,T,C or G

<400> 27
actagtccaa cacagtcaga aacattgttt tgaatcctct gtaaaccaag gcattaatct 60
taataaacca ggatccattt aggtaccact tgatataaaa aggatatcca taatgaatat 120
tttatactgc atcctttaca ttagccacta aatacgttat tgcttgatga agacctttca 180
cagaatccta tggattgcag catttcactt ggctacttca tacccatgcc ttaaagaggg 240
gcagtttctc aaaagcagaa acatgccgcc agttctcaag ttttcctcct aactccattt 300
gaatgtaagg gcagctggcc cccaatgtgg ggaggtccga acattttctg aattcccatt 360
ttcttgttcg cggctaaatg acagtttctg tcattactta gattccgatc tttcccaaag 420
gtgttgattt acaaagaggc cagctaatag cagaaatcat gaccctgaaa gagagatgaa 480
attcaagctg tgagccaggc agganctcag tatggcaaag gtcttgagaa tcngccattt 540
ggtacaaaaa aaatttaaa gcntttatgt tataccatgg aaccatagaa anggcaaggg 600
aattgttaag aanaatttta agtgtccaga cccanaanga aaaaaaaaaa aaaa 654

<210> 28
<211> 670
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 101, 226, 274, 330, 385, 392, 397, 402, 452, 473, 476, 532,
534, 538, 550, 583, 595, 604, 613, 622, 643, 669
<223> n = A,T,C or G

<400> 28
cgtgtgcaca tactgggagg atttccacag ctgcacggtc acagccctta cggattgcca 60
ggaaggggcg aaagatatgt gggataaact gagaaaagaa nccaaaaacc tcaacatcca 120
aggcagctta ttcgaactct gcggcagcgg caacggggcg gcggggtccc tgctcccggc 180
gttcccggtg ctcctggtgt ctctctcggc agctttagcg acctgncttt ccttctgagc 240
gtggggccag ctccccccgc ggcgcccacc cacnctcact ccatgctccc ggaaatcgag 300
aggaagatca ttagttcttt ggggacgttn gtgattctct gtgatgctga aaaacactca 360
tatagggaat gtgggaaatc ctganctctt tnttatntcg tntgatttct tgtgttttat 420
ttgccaaaat gttaccaatc agtgaccaac cnagcacagc caaaaatcgg acntcngctt 480
tagtccgtct tcacacacag aataagaaaa cggcaaaccc accccacttt tnantttnat 540
tattactaan ttttttctgt tgggcaaaag aatctcagga acngccctgg ggccnccgta 600
ctanagttaa ccnagctagt tncatgaaaa atgatgggct ccncctcaat gggaaagcca 660
agaaaaagnc 670

<210> 29
<211> 551
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 336, 474, 504, 511, 522, 523, 524, 540, 547
<223> n = A,T,C or G

<400> 29
actagtcctc cacagcctgt gaatcccccc agacctttca agcatagtga gcggagaaga 60
agatctcagc gtttagccac cttacccatg cctgatgatt ctgtagaaaa ggtttcttct 120
ccctctccag ccactgatgg gaaagtattc tccatcagtt ctcaaaatca gcaagaatct 180
tcagtaccag aggtgcctga tgttgcacat ttgccacttg agaagctggg accctgtctc 240
cctcttgact taagtcgtgg ttcagaagtt acagcaccgg tagcctcaga ttcctcttac 300
cgtaatgaat gtcccagggc agaaaaagag gatacncaga tgcttccaaa tccttcttcc 360
aaagcaatag ctgatgggaa gaggagctcc agcagcagca ggaatatcga aaacagaaaa 420
aaaagtgaaa ttgggaagac aaaagctcaa cagcatttgg taaggagaaa aganaagatg 480
aggaaggaag agagaagaga gacnaagatc nctacggacc gnnncggaag aagaagaagn 540
aaaaaanaaa a 551

<210> 30
<211> 684
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 545, 570, 606, 657, 684
<223> n = A,T,C or G

<400> 30
actagttcta tctggaaaaa gcccgggttg gaagaagctg tggagagtgc gtgtgcaatg 60
cgagactcat ttcttggaag catccctggc aaaaatgcag ctgagtacaa ggttatcact 120
gtgatagaac ctggactgct ttttgagata atagagatgc tgcagtctga agagacttcc 180
agcacctctc agttgaatga attaatgatg gcttctgagt caactttact ggctcaggaa 240
ccacgagaga tgactgcaga tgtaatcgag cttaaaggga aattcctcat caacttagaa 300
ggtggtgata ttcgtgaaga gtcttcctat aaagtaattg tcatgccgac tacgaaagaa 360
aaatgccccc gttgttggaa gtatacagcg ggagtcttca gatacactgt gtcctcgatg 420
tgcagaagtt gtcagtggga aaatagtatt aacagctcac tcgagcaaga accctcctga 480
cagtactggg ctagaagttt ggatggatta tttacaatat aggaaagaaa gccaagaatt 540
aggtnatgag tggatgagta aatggtggan gatggggaat tcaaatcaga attatggaag 600
aagttnttcc tgttactata gaaaggaatt atgtttattt acatgcagaa aatatanatg 660
tgtggtgtgt accgtggatg gaan 684

<210> 31
<211> 654
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 326, 582, 651
<223> n = A,T,C or G

<400> 31
gcgcagaaaa ggaaccaata tttcagaaac aagcttaata ggaacagctg cctgtacatc 60
aacatcttct cagaatgacc cagaagttat catcgtggga gctggcgtgc ttggctctgc 120
tttggcagct gtgctttcca gagatggaag aaaggtgaca gtcattgaga gagacttaaa 180
agagcctgac agaatagttg gagaattcct gcagccgggt ggttatcatg ttctcaaaga 240
ccttggtctt ggagatacag tggaaggtct tgatgcccag gttgtaaatg gttacatgat 300
tcatgatcag ggaaagcaaa tcagangttc agattcctta ccctctgtca gaaaacaatc 360
aagtgcagag tggaagagct ttccatcacg gaagattcat catgagtctc cggaaagcag 420
ctatggcaga gcccaatgca aagtttattg aaggtgttgt gttacagtta ttagaggaag 480
atgatgttgt gatgggagtt cagtacaagg ataaagagac tgggagatat caaggaactc 540
catgctccac tgactgttgt tgcagatggg cttttctcca anttcaggaa aagcctggtc 600
tcaataaagt ttctgtatca ctcatttggt tggcttctta tgaagaatgc nccc 654

<210> 32
<211> 673
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 376, 545, 627
<223> n = A,T,C or G

<400> 32
actagtgaag aaaaagaaat tctgatacgg gacaaaaatg ctcttcaaaa catcattctt 60
tatcacctga caccaggagt tttcattgga aaaggatttg aacctggtgt tactaacatt 120
ttaaagacca cacaaggaag caaaatcttt ctgaaagaag taaatgatac acttctggtg 180
aatgaattga aatcaaaaga atctgacatc atgacaacaa atggtgtaat tcatgttgta 240
gataaactcc tctatccagc agacacacct gttggaaatg atcaactgct ggaaatactt 300
aataaattaa tcaaatacat ccaaattaag tttgttcgtg gtagcacctt caaagaaatc 360

cccgtgactg tctatnagcc aattattaaa aaatacacca aaatcattga tgggagtgcc 420
tgtgggaaat aactgaaaaa gagaccgaga agaacgaatc attacaggtc ctgaaataaa 480
atacctagga tttctactgg aggtggagaa acagaagaac tctgaagaaa ttgttacaag 540
aagangtccc aaggtcacca aattcattga aggtggtgat ggtctttatt tgaagatgaa 600
gaaattaaaa gacgcttcag ggagacnccc catgaaggaa ttgccagcca caaaaaaatt 660
cagggattag aaa 673

<210> 33
<211> 673
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 325, 419, 452, 532, 538, 542, 571, 600, 616, 651, 653, 672
<223> n = A,T,C or G

<400> 33
actagttatt tactttcctc cgcttcagaa ggtttttcag actgagagcc taagcatact 60
ggatctgttg tttcttttgg gtctcacctc atcagtgtgc atagtggcag aaattataaa 120
gaaggttgaa aggagcaggg aaaagatcca gaagcatgtt agttcgacat catcatcttt 180
tcttgaagta tgatgcatat tgcattattt tatttgcaaa ctaggaattg cagtctgagg 240
atcatttaga agggcaagtt caagaggata tgaagatttg agaacttttt aactattcat 300
tgactaaaaa tgaacattaa tgttnaagac ttaagacttt aacctgctgg cagtcccaaa 360
tgaaattatg caactttgat atcatattcc ttgatttaaa ttgggctttt gtgattgant 420
gaaactttat aaagcatatg gtcagttatt tnattaaaaa ggcaaaacct gaaccacctt 480
ctgcacttaa agaagtctaa cagtacaaat acctatctat cttagatgga tntatttntt 540
tntattttta aatattgtac tatttatggt nggtggggct ttcttactaa tacacaaatn 600
aatttatcat ttcaanggca ttctatttgg gtttagaagt tgattccaag nantgcatat 660
ttcgctactg tnt 673

<210> 34
<211> 684
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 414, 472, 480, 490, 503, 507, 508, 513, 523, 574, 575, 598,
659, 662, 675
<223> n = A,T,C or G

<400> 34
actagtttat tcaagaaaag aacttactga ttcctctgtt cctaaagcaa gagtggcagg 60
tgatcagggc tggtgtagca tccggttcct ttagtgcagc taactgcatt tgtcactgat 120
gaccaaggag gaaatcacta agacatttga gaagcagtgg tatgaacgtt cttggacaag 180
ccacagttct gagccttaac cctgtagttt gcacacaaga acgagctcca cctccccttc 240
ttcaggagga atctgtgcgg atagattggc tggacttttc aatggttctg ggttgcaagt 300
gggcactgtt atggctgggt atggagcgga cagccccagg aatcagagcc tcagcccggc 360
tgcctggttg gaaggtacag gtgttcagca ccttcggaaa aagggcataa agtngtgggg 420
gacaattctc agtccaagaa gaatgcattg accattgctg gctatttgct tncctagtan 480
gaattggatn catttttgac cangatnntt ctnctatgct ttnttgcaat gaaatcaaat 540
cccgcattat ctacaagtgg tatgaagtcc tgcnnccccc agagaggctg ttcaggcnat 600
gtcttccaag ggcagggtgg gttacaccat tttacctccc ctctcccccc agattatgna 660

cncagaagga atttntttcc tccc 684

<210> 35
<211> 614
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 17, 20, 152, 223, 267, 287, 304, 306, 316, 319, 321, 355,
365, 382, 391, 407, 419, 428, 434, 464, 467, 477, 480, 495,
499, 505, 515, 516, 522, 524, 527, 542, 547, 549, 567, 572,
576, 578
<223> n = A,T,C or G

<400> 35
actagtccaa cgcgttngcn aatattcccc tggtagccta cttccttacc cccgaatatt 60
ggtaagatcg agcaatggct tcaggacatg ggttctcttc tcctgtgatc attcaagtgc 120
tcactgcatg aagactggct tgtctcagtg tntcaacctc accagggctg tctcttggtc 180
cacacctcgc tccctgttag tgccgtatga cagcccccat canatgacct tggccaagtc 240
acggtttctc tgtggtcaat gttggtnggc tgattggtgg aaagtanggt ggaccaaagg 300
aagncncgtg agcagncanc nccagttctg caccagcagc gcctccgtcc tactngggtg 360
ttccngtttc tcctggccct gngtgggcta nggcctgatt cgggaanatg cctttgcang 420
gaaggganga taantgggat ctaccaattg attctggcaa aacnatntct aagattnttn 480
tgctttatgt ggganacana tctanctctc atttnntgct gnanatnaca ccctactcgt 540
gntcgancnc gtcttcgatt ttcgganaca cnccantnaa tactggcgtt ctgttgttaa 600
aaaaaaaaaa aaaa 614

<210> 36
<211> 686
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 222, 224, 237, 264, 285, 548, 551, 628, 643, 645, 665, 674
<223> n = A,T,C or G

<400> 36
gtggctggcc cggttctccg cttctcccca tcccctactt tcctccctcc ctccctttcc 60
ctccctcgtc gactgttgct tgctggtcgc agactccctg acccctccct cacccctccc 120
taacctcggt gccaccggat tgcccttctt ttcctgttgc ccagcccagc cctagtgtca 180
gggcgggggc ctggagcagc ccgaggcact gcagcagaag ananaaaaga cacgacnaac 240
ctcagctcgc cagtccggtc gctngcttcc cgccgcatgg caatnagaca gacgccgctc 300
acctgctctg ggcacacgcg acccgtggtt gatttggcct tcagtggcat cacccttatg 360
ggtatttctt aatcagcgct tgcaaagatg gttaacctat gctacgccag ggagatacag 420
gagactggat tggaacattt ttggggtcta aaggtctgtt tggggtgcaa cactgaataa 480
ggatgccacc aaagcagcta cagcagctgc agatttcaca gcccaagtgt gggatgctgt 540
ctcagganat naattgataa cctggctcat aacacattgt caagaatgtg gatttcccca 600
ggatattatt atttgtttac cgggggganag gataactgtt tcncntattt taattgaaca 660
aactnaaaca aaanctaagg aaatcc 686

<210> 37
<211> 681

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 7, 10, 11, 19, 25, 32, 46, 53, 77, 93, 101, 103, 109, 115,
123, 128, 139, 157, 175, 180, 192, 193, 194, 212, 218, 226,
227, 233, 240, 241, 259, 260, 267, 289, 296, 297, 298, 312,
313, 314, 320, 325, 330, 337, 345, 346, 352, 353, 356
<223> n = A,T,C or G

<221> misc_feature
<222> 382, 385, 400, 427, 481, 484, 485, 491, 505, 515, 533, 542,
544, 554, 557, 560, 561, 564, 575, 583, 589, 595, 607, 619,
628, 634, 641, 645, 658, 670
<223> n = A,T,C or G

<400> 37
gagacanacn naacgtcang agaanaaaag angcatggaa cacaanccag gcncgatggc 60
caccttccca ccagcancca gcgccccnca gcngccccca ngnccggang accangactc 120
cancctgnat caatctganc tctattcctg gcccatncct acctcggagg tggangccgn 180
aaaggtcgca cnnncagaga agctgctgcc ancaccancc gccccnnccc tgncgggctn 240
nataggaaac tggtgaccnn gctgcanaat tcatacagga gcacgcgang ggcacnnnct 300
cacactgagt tnnngatgan gcctnaccan ggacctnccc cagcnnattg annacnggac 360
tgcggaggaa ggaagacccc gnacnggatc ctggccggcn tgccaccccc ccacccctag 420
gattatnccc cttgactgag tctctgaggg gctacccgaa cccgcctcca ttcccctacca 480
natnntgctc natcgggact gacangctgg ggatnggagg ggctatcccc cancatcccc 540
tnanaccaac agcnacngan natnggggct ccccngggtc ggngcaacnc tcctncaccc 600
cggcgcnggc cttcggtgnt gtcctccntc aacnaattcc naaanggcgg gccccccngt 660
ggactcctcn ttgttccctc c 681

<210> 38
<211> 687
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 3, 30, 132, 151, 203, 226, 228, 233, 252, 264, 279, 306,
308, 320, 340, 347, 380, 407, 429, 437, 440, 445, 448, 491,
559, 567, 586, 589, 593, 596, 603, 605, 606, 609, 626, 639,
655, 674, 682
<223> n = A,T,C or G

<400> 38
canaaaaaaa aaaacatggc cgaaaccagn aagctgcgcg atggcgccac ggcccctctt 60
ctcccggcct gtgtccggaa ggtttccctc cgaggcgccc cggctcccgc aagcggagga 120
gagggcggga cntgccgggg ccggagctca naggccctgg ggccgctctg ctctcccgcc 180
atcgcaaggg cggcgctaac ctnaggcctc cccgcaaagg tccccnangc ggnggcggcg 240
gggggctgtg anaaccgcaa aaanaacgct gggcgcgcng cgaacccgtc cacccccgcg 300
aaggananac ttccacagan gcagcgtttc cacagcccan agccacnttt ctagggtgat 360
gcaccccagt aagttcctgn cggggaagct caccgctgtc aaaaaanctc ttcgctccac 420
cggcgcacna aggggangan ggcangangc tgccgcccgc acaggtcatc tgatcacgtc 480
gcccgcccta ntctgctttt gtgaatctcc actttgttca accccacccg ccgttctctc 540

ctccttgcgc cttcctctna ccttaanaac cagcttcctc tacccnatng tanttnctct 600
gcncnngtng aaattaattc ggtccnccgg aacctcttnc ctgtggcaac tgctnaaaga 660
aactgctgtt ctgnttactg cngtccc 687

<210> 39
<211> 695
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 300, 401, 423, 429, 431, 437, 443, 448, 454, 466, 492, 515,
523, 524, 536, 538, 541, 552, 561, 566, 581, 583, 619, 635,
636, 641, 649, 661, 694
<223> n = A,T,C or G

<400> 39
actagtctgg cctacaatag tgtgattcat gtaggacttc tttcatcaat tcaaaacccc 60
tagaaaaacg tatacagatt atataagtag ggataagatt tctaacattt ctgggctctc 120
tgacccctgc gctagactgt ggaaagggag tattattata gtatacaaca ctgctgttgc 180
cttattagtt ataacatgat aggtgctgaa ttgtgattca caatttaaaa acactgtaat 240
ccaaactttt ttttttaact gtagatcatg catgtgaatg ttaatgttaa tttgttcaan 300
gttgttatgg gtagaaaaaa ccacatgcct taaaatttta aaaagcaggg cccaaactta 360
ttagtttaaa attaggggta tgtttccagt ttgttattaa ntggttatag ctctgtttag 420
aanaaatcna ngaacangat ttngaaantt aagntgacat tatttnccag tgacttgtta 480
atttgaaatc anacacggca ccttccgttt tggtnctatt ggnntttgaa tccaancngg 540
ntccaaatct tnttggaaac ngtccnttta actttttttac nanatcttat ttttttattt 600
tggaatggcc ctatttaang ttaaaagggg ggggnnccac naccattcnt gaataaaact 660
naatatatat ccttggtccc ccaaaattta aggng 695

<210> 40
<211> 674
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 403, 428, 432, 507, 530, 543, 580, 583, 591, 604, 608, 621,
624, 626, 639, 672
<223> n = A,T,C or G

<400> 40
actagtagtc agttgggagt ggttgctata ccttgacttc atttatatga atttccactt 60
tattaaataa tagaaaagaa aatcccggtg cttgcagtag agttatagga cattctatgc 120
ttacagaaaa tatagccatg attgaaatca aatagtaaag gctgttctgg ctttttatct 180
tcttagctca tcttaaataa gtagtacact tgggatgcag tgcgtctgaa gtgctaatca 240
gttgtaacaa tagcacaaat cgaacttagg atgtgtttct tctcttctgt gtttcgattt 300
tgatcaattc tttaattttg ggaacctata atacagtttt cctattcttg gagataaaaa 360
ttaaatggat cactgatatt taagtcattc tgcttctcat ctnaatattc catattctgt 420
attagganaa antacctccc agcacagccc cctctcaaac cccacccaaa accaagcatt 480
tggaatgagt ctcctttatt tccgaantgt ggatggtata acccatatcn ctccaatttc 540
tgnttgggtt gggtattaat ttgaactgtg catgaaaagn ggnaatcttt nctttgggtc 600
aaantttncc ggttaatttg nctngncaaa tccaatttnc tttaagggtg tctttataaa 660
atttgctatt cngg 674

<210> 41
<211> 657
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 243, 247, 251, 261, 267, 272, 298, 312, 315, 421, 432, 434,
501, 524, 569, 594, 607, 650
<223> n = A,T,C or G

<400> 41
gaaacatgca agtaccacac actgtttgaa ttttgcacaa aaagtgactg tagggatcag 60
gtgatagccc cggaatgtac agtgtcttgg tgcaccaaga tgccttctaa aggctgacat 120
accttgggac cctaatgggg cagagagtat agccctagcc cagtggtgac atgaccactc 180
cctttgggag gctgaagtta aagggaatgg tatgtgtttt ctcatggaag cagcacatga 240
atnggtnaca ngatgttaaa ntaaggntct antttgggtg tcttgtcatt tgaaaaantg 300
acacactcct ancanctggt aaaggggtgc tggaagccat ggaagaactc taaaaacatt 360
agcatgggct gatctgatta cttcctggca tcccgctcac ttttatggga agtcttatta 420
naaggatggg anantttcc atatccttgc tgttggaact ctggaacact ctctaaattt 480
ccctctatta aaaatcactg nccttactac acttcctcct tganggaata gaaatggacc 540
tttctctgac ttagttcttg gcatggganc cagcccaaat taaaatctga cttntccggt 600
ttctccngaa ctcacctact tgaattggta aaacctcctt tggaattagn aaaaacc 657

<210> 42
<211> 389
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 179, 317, 320
<223> n = A,T,C or G

<400> 42
actagtgctg aggaatgtaa acaagtttgc tgggccttgc gagacttcac caggttgttt 60
cgatagctca cactcctgca ctgtgcctgt cacccaggaa tgtcttttt aattagaaga 120
caggaagaaa acaaaaacca gactgtgtcc cacaatcaga aacctccgtt gtggcagang 180
ggccttcacc gccaccaggg tgtcccgcca gacagggaga gactccagcc ttctgaggcc 240
atcctgaaga attcctgttt gggggttgtg aaggaaaatc acccggattt aaaaagatgc 300
tgttgcctgc ccgcgtngtn gggaagggac tggtttcctg gtgaatttct taaaagaaaa 360
atattttaag ttaagaaaaa aaaaaaaaa 389

<210> 43
<211> 279
<212> DNA
<213> Homo sapiens

<400> 43
actagtgaca agctcctggt cttgagatgt cttctcgtta aggagatggg ccttttggag 60
gtaaaggata aaatgaatga gttctgtcat gattcactat tctagaactt gcatgacctt 120
tactgtgtta gctctttgaa tgttcttgaa attttagact ttctttgtaa acaaataata 180
tgtccttatc attgtataaa agctgttatg tgcaacagtg tggagatcct tgtctgattt 240

aataaaatac ttaaacactg aaaaaaaaaa aaaaaaaaa 279

<210> 44
<211> 449
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 245, 256, 264, 266, 273, 281, 323, 325, 337, 393
<223> n = A,T,C or G

<400> 44
actagtagca tcttttctac aacgttaaaa ttgcagaagt agcttatcat taaaaaacaa 60
caacaacaac aataacaata aatcctaagt gtaaatcagt tattctaccc cctaccaagg 120
atatcagcct gttttttccc ttttttctcc tgggaataat tgtgggcttc ttcccaaatt 180
tctacagcct ctttcctctt ctcatgcttg agcttccctg tttgcacgca tgcgttgtgc 240
aagantgggc tgtttngctt ggantncggt ccnagtggaa ncatgctttc ccttgttact 300
gttggaagaa actcaaacct tcnanccccta ggtgttncca ttttgtcaag tcatcactgt 360
atttttgtac tggcattaac aaaaaaagaa atnaaatatt gttccattaa actttaataa 420
aactttaaaa gggaaaaaaa aaaaaaaaa 449

<210> 45
<211> 559
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 263
<223> n = A,T,C or G

<400> 45
actagtgtgg gggaatcacg gacacttaaa gtcaatctgc gaaataattc ttttattaca 60
cactcactga agtttttgag tcccagagag ccattctatg tcaaacattc caagtactct 120
ttgagagccc agcattacat caacatgccc gtgcagttca aaccgaagtc cgcaggcaaa 180
tttgaagctt tgcttgtcat tcaaacagat gaaggcaaga gtattgctat tcgactaatt 240
ggtgaagctc ttggaaaaaa ttnactagaa tacttttttgt gttaagttaa ttacataagt 300
tgtattttgt taactttatc tttctacact acaattatgc ttttgtatat atattttgta 360
tgatggatat ctataattgt agattttgtt tttacaagct aatactgaag actcgactga 420
aatattatgt atctagccca tagtattgta cttaactttt acagggtgaa aaaaaaattc 480
tgtgtttgca ttgattatga tattctgaat aaatatggga atatatttta atgtgggtaa 540
aaaaaaaaaa aaaaaggaa 559

<210> 46
<211> 731
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 270, 467, 477, 502, 635, 660, 671, 688, 695, 697, 725
<223> n = A,T,C or G

<400> 46
actagttcta gtaccatggc tgtcatagat gcaaccatta tattccattt agtttcttcc 60
tcaggttccc taacaattgt ttgaaactga atatatatgt ttatgtatgt gtgtgtgttc 120
actgtcatgt atatggtgta tatgggatgt gtgcagtttt cagttatata tatattcata 180
tatacatatg catatatatg tataatatac atatatacat gcatacactt gtataatata 240
catatatata cacatatatg cacacatatn atcactgagt tccaaagtga gtctttattt 300
ggggcaattg tattctctcc ctctgtctgc tcactgggcc tttgcaagac atagcaattg 360
cttgatttcc tttggataag agtcttatct tcggcactct tgactctagc cttaacttta 420
gatttctatt ccagaatacc tctcatatct atcttaaaac ctaaganggg taaagangtc 480
ataagattgt agtatgaaag antttgctta gttaaattat atctcaggaa actcattcat 540
ctacaaatta aattgtaaaa tgatggtttg ttgtatctga aaaaatgttt agaacaagaa 600
atgtaactgg gtacctgtta tatcaaagaa cctcnattta ttaagtctcc tcatagccan 660
atccttatat ngccctctct gacctgantt aatananact tgaataatga atagttaatt 720
taggnttggg c 731

<210> 47
<211> 640
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 5, 28, 106, 153, 158, 173, 176, 182, 189, 205, 210, 214,
225, 226, 229, 237, 260, 263, 269, 277, 281, 282, 322, 337,
338, 354, 365, 428, 441, 443, 456, 467, 476, 484, 503, 508,
554, 567, 575, 579, 588, 601, 606, 609, 611, 621, 636
<223> n = A,T,C or G

<400> 47
tgcgngccgg tttggccctt ctttgtanga cactttcatc cgccctgaaa tcttcccgat 60
cgttaataac tcctcaggtc cctgcctgca cagggttttt tcttantttg ttgcctaaca 120
gtacaccaaa tgtgacatcc tttcaccaat atngattnct tcataccaca tcntcnatgg 180
anacgactnc aacaattttt tgatnacccn aaanactggg ggctnnaana agtacantct 240
ggagcagcat ggacctgtcn gcnactaang gaacaanagt nntgaacatt tacacaacct 300
ttggtatgtc ttactgaaag anagaaacat gcttctnncc ctagaccacg aggncaaccg 360
caganattgc caatgccaag tccgagcggt tagatcaggt aatacattcc atggatgcat 420
tacatacntt gtccccgaaa nanaagatgc cctaanggct tcttcanact ggtccngaaa 480
acanctacac ctggtgcttg ganaacanac tctttggaag atcatctggc acaagttccc 540
cccagtgggt tttnccttgg cacctanctt accanatcna ttcggaancc attctttgcc 600
ntggcnttnt nttgggacca ntcttctcac aactgnaccc 640

<210> 48
<211> 257
<212> DNA
<213> Homo sapiens

<400> 48
actagtatat gaaaatgtaa atatcacttg tgtactcaaa caaaagttgg tcttaagctt 60
ccaccttgag cagccttgga aacctaacct gcctctttta gcataatcac attttctaaa 120
tgattttctt tgttcctgaa aaagtgattt gtattagttt tacatttgtt ttttggaaga 180
ttatatttgt atatgtatca tcataaaata tttaaataaa aagtatcttt agagtgaaaa 240
aaaaaaaaaa aaaaaaa 257

<210> 49

<211> 652
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 410, 428, 496, 571, 647
<223> n = A,T,C or G

<400> 49
actagttcag atgagtggct gctgaagggg ccccccttgtc attttcatta taacccaatt 60
tccacttatt tgaactctta agtcataaat gtataatgac ttatgaatta gcacagttaa 120
gttgacacta gaaactgccc atttctgtat tacactatca aataggaaac attggaaaga 180
tggggaaaaa aatcttattt taaaatggct tagaaagttt tcagattact ttgaaaattc 240
taaacttctt tctgtttcca aaacttgaaa atatgtagat ggactcatgc attaagactg 300
ttttcaaagc tttcctcaca tttttaaagt gtgattttcc ttttaatata catatttatt 360
ttctttaaag cagctatatc ccaacccatg actttggaga tatacctatn aaaccaatat 420
aacagcangg ttattgaagc agctttctca aatgttgctt cagatgtgca agttgcaaat 480
tttattgtat ttgtanaata caatttttgt tttaaactgt atttcaatct atttctccaa 540
gatgcttttc atatagagtg aaatatccca ngataactgc ttctgtgtcg tcgcatttga 600
cgcataactg cacaaatgaa cagtgtatac ctcttggttg tgcattnacc cc 652

<210> 50
<211> 650
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 237, 270, 311, 443, 454, 488, 520, 535, 539, 556, 567, 594,
603, 634
<223> n = A,T,C or G

<400> 50
ttgcgctttg atttttttag ggcttgtgcc ctgtttcact tatagggtct agaatgcttg 60
tgttgagtaa aaaggagatg cccaatattc aaagctgcta aatgttctct ttgccataaa 120
gactccgtgt aactgtgtga acacttggga tttttctcct ctgtcccgag gtcgtcgtct 180
gctttctttt ttgggttctt tctagaagat tgagaaatgc atatgacagg ctgagancac 240
ctccccaaac acacaagctc tcagccacan gcagcttctc cacagcccca gcttcgcaca 300
ggctcctgga nggctgcctg ggggaggcag acatgggagt gccaaggtgg ccagatggtt 360
ccaggactac aatgtcttta ttttttaactg tttgccactg ctgccctcac ccctgcccqg 420
ctctggagta ccgtctgccc canacaagtg ggantgaaat gggggtgggg gggaacactg 480
attcccantt agggggtgcc taactgaaca gtagggatan aaggtgtgaa cctgngaant 540
gcttttataa attatnttcc ttgttanatt tatttttttaa tttaatctct gttnaactgc 600
ccngggaaaa ggggaaaaaa aaaaaaaaat tctntttaaa cacatgaaca 650

<210> 51
<211> 545
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 66, 159, 195, 205, 214, 243, 278, 298, 306, 337, 366, 375,

382, 405, 446, 477, 492, 495, 503, 507, 508, 521, 537
<223> n = A,T,C or G

<400> 51
tggcgtgcaa ccagggtagc tgaagtttgg gtctgggact ggagattggc cattaggcct 60
cctganattc cagctccctt ccaccaagcc cagtcttgct acgtggcaca gggcaaacct 120
gactcccttt gggcctcagt ttcccctccc cttcatgana tgaaaagaat actacttttt 180
cttgttggtc taacnttgct ggacncaaag tgtngtcatt attgttgtat tgggtgatgt 240
gtncaaaact gcagaagctc actgcctatg agaggaanta agagagatag tggatganag 300
ggacanaagg agtcattatt tggtatagat ccacccntcc caacctttct ctcctcagtc 360
cctgcncctc atgtntctgg tntggtgagt cctttgtgcc accanccatc atgctttgca 420
ttgctgccat cctgggaagg gggtgnatcg tctcacaact tgttgtcatc gtttganatg 480
catgctttct tnatnaaaca aanaaannaa tgtttgacag ngtttaaaat aaaaaanaaa 540
caaaa 545

<210> 52
<211> 678
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 98, 119, 121, 131, 136, 139, 140, 142, 143, 163, 168, 172,
176, 184, 189, 190, 191, 200, 201, 205, 207, 221, 223, 229,
230, 237, 240, 241, 255, 264, 266, 267, 276, 280, 288, 289,
291, 297, 301, 306, 308, 314, 315, 326, 332, 335, 337
<223> n = A,T,C or G

<221> misc_feature
<222> 339, 341, 343, 344, 345, 347, 350, 355, 356, 358, 362, 363,
372, 379, 395, 397, 398, 400, 403, 412, 414, 421, 423, 431,
435, 438, 439, 450, 457, 463, 467, 471, 474, 480, 483, 484,
487, 490, 491, 492, 493, 499, 500, 504, 508, 518, 536
<223> n = A,T,C or G

<221> misc_feature
<222> 538, 549, 551, 552, 554, 556, 557, 562, 563, 567, 571, 572,
576, 579, 590, 592, 595, 598, 606, 609, 613, 620, 622, 624,
626, 631, 634, 638, 641, 647, 654, 660, 661, 674
<223> n = A,T,C or G

<400> 52
actagtagaa gaactttgcc gcttttgtgc ctctcacagg cgcctaaagt cattgccatg 60
ggaggaagac gatttggggg gggaggggggg gggggcangg tccgtggggc tttccctant 120
ntatctccat ntccantgnn cnntgtcgcc tcttccctcg tcncattnga anttantccc 180
tggncccccnn nccctctccn ncctncncct ccccccctccg ncncctccnn ctttttntan 240
ncttccccat ctccntcccc cctnanngtc ccaacnccgn cagcaatnnc ncacttnctc 300
nctccncncc tccnnccgtt cttctnttct cnacntntnc ncnnntnccn tgccnntnaa 360
annctctccc cnctgcaanc gattctctcc ctccncnnan ctntccactc cntncttctc 420
ncncgctcct nttcntcnnc ccacctctcn ccttcgnccc cantacnctc nccncccttn 480
cgnntcnttn nnntcctcnn accncccncc tcccttcncc cctcttctcc ccggtntntc 540
tctctcccnc nncncnncct cnncccntcc nngcgncent ttccgccccn cnccnccntt 600
ccttcntcnc cantccatcn cntntnccat nctncctncc nctcacnccc gctncccccn 660
ntctctttca cacngtcc 678

<210> 53
<211> 502
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 139, 146, 215, 217, 257, 263, 289, 386, 420, 452, 457, 461,
466, 482, 486
<223> n = A,T,C or G

<400> 53
tgaagatcct ggtgtcgcca tgggccgccg ccccgcccgt tgttaccggt attgtaagaa 60
caagccgtac ccaaagtctc gcttctgccg aggtgtccct gatgccaaaa ttcgcatttt 120
tgacctgggg cggaaaaang caaaantgga tgagtctccg ctttgtggcc acatggtgtc 180
agatcaatat gagcagctgt cctctgaagc cctgnangct gcccgaattt gtgccaataa 240
gtacatggta aaaagtngtg gcnaagatgc ttccatatcc gggtgcggnt ccacccccttc 300
cacgtcatcc gcatcaacaa gatgttgtcc tgtgctgggg ctgacaggct cccaacaggc 360
atgcgaagtg cctttggaaa acccanggca ctgtggccag ggttcacatt gggccaattn 420
atcatgttca tccgcaccaa ctgcagaaca angaacntgt naattnaagc cctgcccagg 480
gncaanttca aatttcccgg cc 502

<210> 54
<211> 494
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 431, 442, 445
<223> n = A,T,C or G

<400> 54
actagtccaa gaaaaatatg cttaatgtat attacaaagg ctttgtatat gttaacctgt 60
tttaatgcca aaagtttgct ttgtccacaa tttccttaag acctcttcag aaagggattt 120
gtttgcctta atgaatactg ttgggaaaaa acacagtata atgagtgaaa agggcagaag 180
caagaaattt ctacatctta gcgactccaa gaagaatgag tatccacatt tagatggcac 240
attatgagga ctttaatctt tccttaaaca caataatgtt ttctttttc ttttattcac 300
atgatttcta agtatatttt tcatgcagga cagtttttca accttgatgt acagtgactg 360
tgttaaattt ttctttcagt ggcaacctct ataatcttta aaatatggtg agcatcttgt 420
ctgttttgaa ngggatatga cnatnaatct atcagatggg aaatcctgtt tccaagttag 480
aaaaaaaaaa aaaa 494

<210> 55
<211> 606
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 375, 395, 511, 542, 559, 569, 578, 581
<223> n = A,T,C or G

<400> 55
actagtaaaa agcagcattg ccaaataatc cctaattttc cactaaaaat ataatgaaat 60
gatgttaagc tttttgaaaa gtttaggtta aacctactgt tgttagatta atgtatttgt 120
tgcttccctt tatctggaat gtggcattag ctttttttatt ttaaccctct ttaattctta 180
ttcaattcca tgacttaagg ttggagagct aaacactggg atttttggat aacagactga 240
cagttttgca taattataat cggcattgta catagaaagg atatggctac cttttgttaa 300
atctgcactt tctaaatatc aaaaaaggga aatgaagtat aaatcaattt ttgtataatc 360
tgtttgaaac atganttta tttgcttaat attanggctt tgccctttc tgttagtctc 420
ttgggatcct gtgtaaaact gttctcatta aacaccaaac agttaagtcc attctctggt 480
actagctaca aattccgttt catattctac ntaacaattt aaattaactg aaatatttct 540
anatggtcta cttctgtcnt ataaaaacna aacttgantt nccaaaaaaa aaaaaaaaaa 600
aaaaaa 606

<210> 56
<211> 183
<212> DNA
<213> Homo sapiens

<400> 56
actagtatat ttaaacttac aggcttattt gtaatgtaaa ccaccatttt aatgtactgt 60
aattaacatg gttataatac gtacaatcct tccctcatcc catcacacaa ctttttttgt 120
gtgtgataaa ctgattttgg tttgcaataa aaccttgaaa aataaaaaaa aaaaaaaaaa 180
aaa 183

<210> 57
<211> 622
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 358, 368, 412, 414, 425, 430, 453, 455, 469, 475, 495, 499,
529, 540, 564, 575, 590
<223> n = A,T,C or G

<400> 57
actagtcact actgtcttct ccttgtagct aatcaatcaa tattcttccc ttgcctgtgg 60
gcagtggaga gtgctgctgg gtgtacgctg cacctgccca ctgagttggg gaaagaggat 120
aatcagtgag cactgttctg ctcagagctc ctgatctacc ccacccccta ggatccagga 180
ctgggtcaaa gctgcatgaa accaggccct ggcagcaacc tgggaatggc tggaggtggg 240
agagaacctg acttctcttt ccctctccct cctccaacat tactggaact ctatcctgtt 300
agggatcttc tgagcttgtt tccctgctgg gtgggacaga agacaaagga gaagggangg 360
tctacaanaa gcagcccttc tttgtcctct ggggttaatg agcttgacct ananttcatg 420
gaganaccan aagcctctga tttttaattt ccntnaaatg tttgaagtnt atatntacat 480
atatatattt ctttnaatnt ttgagtcttt gatatgtctt aaaatccant ccctctgccn 540
gaaacctgaa ttaaaaccat gaanaaaaat gtttncctta aagatgttan taattaattg 600
aaacttgaaa aaaaaaaaaa aa 622

<210> 58
<211> 433
<212> DNA
<213> Homo sapiens

<400> 58

gaacaaattc tgattggtta tgtaccgtca aaagacttga agaaatttca tgattttgca 60
gtgtggaagc gttgaaaatt gaaagttact gcttttccac ttgctcatat agtaaaggga 120
tcctttcagc tgccagtgtt gaataatgta tcatccagag tgatgttatc tgtgacagtc 180
accagcttta agctgaacca ttttatgaat accaaataaa tagacctctt gtactgaaaa 240
catatttgtg actttaatcg tgctgcttgg atagaaatat ttttactggt tcttctgaat 300
tgacagtaaa cctgtccatt atgaatggcc tactgttcta ttatttgttt tgacttgaat 360
ttatccacca aagacttcat ttgtgtatca tcaataaagt tgtatgtttc aactgaaaaa 420
aaaaaaaaaa aaa 433

<210> 59
<211> 649
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 22, 190, 217, 430, 433, 484, 544, 550, 577, 583, 594
<223> n = A,T,C or G

<400> 59
actagttatt atctgacttt cnggttataa tcattctaat gagtgtgaag tagcctctgg 60
tgtcatttgg atttgcattt ctctgatgag tgatgctatc aagcaccttt gctggtgctg 120
ttggccatat gtgtatgttc cctggagaag tgtctgtgct gagccttggc ccacttttta 180
attaggcgtn tgtcttttta ttactgagtt gtaaganttc tttatatatt ctggattcta 240
gacccttatc agatacatgg tttgcaaata ttttctccca ttctgtgggt tgtgttttca 300
ctttatcgat aatgtcctta gacatataat aaatttgtat tttaaaagtg acttgatttg 360
ggctgtgcaa ggtgggctca cgcttgtaat cccagcactt tgggagactg aggtgggtgg 420
atcatatgan gangctagga gttcgaggtc agcctggcca gcatagcgaa aacttgtctc 480
tacnaaaaat acaaaaatta gtcaggcatg gtggtgcacg tctgtaatac cagcttctca 540
ggangctgan gcacaaggat cacttgaacc ccagaangaa gangttgcag tganctgaag 600
atcatgccag ggcaacaaaa atgagaactt gtttaaaaaa aaaaaaaaa 649

<210> 60
<211> 423
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 209, 222, 277, 389, 398
<223> n = A,T,C or G

<400> 60
actagttcag gccttccagt tcactgacaa acatggggaa gtgtgcccag ctggctggaa 60
acctggcagt gataccatca agcctgatgt ccaaaagagc aaagaatatt tctccaagca 120
gaagtgagcg ctgggctgtt ttagtgccag gctgcggtgg gcagccatga gaacaaaacc 180
tcttctgtat ttttttttc cattagtana acacaagact cngattcagc cgaattgtgg 240
tgtcttacaa ggcagggctt tcctacaggg ggtgganaaa acagcctttc ttcctttggt 300
aggaatggcc tgagttggcg ttgtgggcag gctactggtt tgtatgatgt attagtagag 360
caacccatta atcttttgta gtttgtatna aacttganct gagaccttaa acaaaaaaaa 420
aaa 423

<210> 61
<211> 423

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 195, 285, 295, 329, 335, 340, 347, 367, 382, 383, 391, 396,
418
<223> n = A,T,C or G

<400> 61
cgggactgga atgtaaagtg aagttcggag ctctgagcac gggctcttcc cgccgggtcc 60
tccctcccca gaccccagag ggagaggccc accccgccca gccccgcccc agcccctgct 120
caggtctgag tatggctggg agtcgggggc cacaggcctc tagctgtgct gctcaagaag 180
actggatcag ggtanctaca agtggccggg ccttgccttt gggattctac cctgttccta 240
atttggtgtt ggggtgcggg gtccctggcc ccctttcca cactncctcc ctccngacag 300
caacctccct tggggcaatt gggcctggnt ctccncccgn tgttgcnacc ctttgttggt 360
ttaaggnctt taaaaatgtt annttttccc ntgccngggt taaaaaagga aaaaactnaa 420
aaa 423

<210> 62
<211> 683
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 218, 291, 305, 411, 416, 441, 443, 453, 522, 523, 536, 542,
547, 566, 588, 592, 595, 603, 621, 628, 630, 632, 644, 645,
648, 655, 660, 672, 674, 676, 677, 683
<223> n = A,T,C or G

<400> 62
gctggagagg ggtacggact ttcttggagt tgtcccaggt tggaatgaga ctgaactcaa 60
gaagagaccc taagagactg gggaatggtt cctgccttca ggaaagtgaa agacgcttag 120
gctgtcaaca cttaaaggaa gtccccttga agcccagagt ggacagacta gacccattga 180
tggggccact ggccatggtc cgtggacaag acattccngt gggccatggc acaccggggg 240
ggatcaaaat gtgtacttgt ggggtctcgc cccttgccaa aaccaaacca ntcccactcc 300
tgtcnttgga ctttcttccc attccctcct ccccaaatgc acttcccctc ctccctctgc 360
ccctcctgtg tttttggaat tctgtttccc tcaaaattgt taatttttta nttttngacc 420
atgaacttat gtttggggtc nangttcccc ttnccaatgc atactaatat attaatggtt 480
atttatttt gaaatatttt ttaatgaact tggaaaaaat tnntggaatt tccttncttc 540
cnttttnttt ggggggggtg gggggntggg ttaaaatttt tttggaancc cnatnggaaa 600
ttnttacttg gggccccccc naaaaaantn anttccaatt cttnnatngc ccctnttccn 660
ctaaaaaaaa ananannaaa aan 683

<210> 63
<211> 731
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 237, 249, 263, 288, 312, 317, 323, 326, 337, 352, 362, 370,
377, 400, 411, 414, 434, 436, 446, 457, 473, 486, 497, 498,

502, 512, 531, 546, 554, 563, 565, 566, 588, 597, 608, 611,
613, 615, 627, 632, 640, 641, 644, 654, 660, 663, 665
<223> n = A,T,C or G

<221> misc_feature
<222> 671, 678, 692, 697, 698, 699, 704, 705, 712, 714, 717, 718,
719, 723, 725, 730, 731
<223> n = A,T,C or G

<400> 63
actagtcata aagggtgtgc gcgtcttcga cgtggcggtc ttggcgccac tgctgcgaga 60
cccggccctg gacctcaagg tcatccactt ggtgcgtgat ccccgcgcgg tggcgagttc 120
acggatccgc tcgcgccacg gcctcatccg tgagagccta caggtggtgc gcagccgaga 180
ccgcgagctc accgcatgcc cttcttggag gccgcgggcc acaagcttgg cgcccanaaa 240
gaaggcgtng ggggcccgca aantaccacg ctctgggcgc tatggaangt cctcttgcaa 300
taatattggt tnaaaanctg canaanagcc cctgcanccc cctgaactgg gntgcagggc 360
cncttacctn gtttggntgc ggttacaaag aacctgtttn ggaaaaccct nccnaaaacc 420
ttccgggaaa attntncaaa tttttnttgg ggaattnttg ggtaaacccc ccnaaaatgg 480
gaaacntttt tgccctnnaa antaaaccat tnggttccgg gggccccccc ncaaaaccct 540
ttttttnttt tttntgcccc cantnnnccc ccggggcccc tttttttngg ggaaaanccc 600
ccccccctncc nanantttta aaagggnggg anaatttttn nttnccccnc gggnccccnn 660
ggngntaaaa nggtttcncc cccccgaggg gnggggnnnc ctcnnaaacc cntntcnnna 720
ccncnttttn n 731

<210> 64
<211> 313
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 240
<223> n = A,T,C or G

<400> 64
actagttgtg caaaccacga ctgaagaaag acgaaaagtg ggaaataact tgcaacgtct 60
gttagagatg gttgctacac atgttgggtc tgtagagaaa catcttgagg agcagattgc 120
taaagttgat agagaatatg aagaatgcat gtcagaagat ctctcggaaa atattaaaga 180
gattagagat aagtatgaga agaaagctac tctaattaag tcttctgaag aatgaagatn 240
aaatgttgat catgtatata tatccatagt gaataaaatt gtctcagtaa agttgtaaaa 300
aaaaaaaaaa aaa 313

<210> 65
<211> 420
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 400, 402, 403, 404, 405, 406, 409, 411, 412, 414, 415, 416
<223> n = A,T,C or G

<400> 65
actagttccc tggcaggcaa gggcttccaa ctgaggcagt gcatgtgtgg cagagagagg 60

caggaagctg gcagtggcag cttctgtgtc tagggagggg tgtggctccc tccttccctg 120
tctgggaggt tggagggaag aatctaggcc ttagcttgcc ctcctgccac ccttcccctt 180
gtagatactg ccttaacact ccctcctctc tcagctgtgg ctgccaccca agccaggttt 240
ctccgtgctc actaatttat ttccaggaaa ggtgtgtgga agacatgagc cgtgtataat 300
atttgtttta acattttcat tgcaagtatt gaccatcatc cttggttgtg tatcgttgta 360
acacaaatta atgatattaa aaagcatcca aacaaagccn annnnnaana nnannngaaa 420

<210> 66
<211> 676
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 328, 454, 505, 555, 586, 612, 636, 641
<223> n = A,T,C or G

<400> 66
actagtttcc tatgatcatt aaactcattc tcagggttaa gaaaggaatg taaatttctg 60
cctcaatttg tacttcatca ataagttttt gaagagtgca gatttttagt caggtcttaa 120
aaataaactc acaaatctgg atgcatttct aaattctgca aatgtttcct ggggtgactt 180
aacaaggaat aatcccacaa tatacctagc tacctaatac atggagctgg ggctcaaccc 240
actgtttta aggatttgcg cttacttgtg gctgaggaaa aataagtagt tccgagggaa 300
gtagttttta aatgtgagct tatagatngg aaacagaata tcaacttaat tatggaaatt 360
gttagaaacc tgttctcttg ttatctgaat cttgattgca attactattg tactggatag 420
actccagccc attgcaaagt ctcagatatc ttanctgtgt agttgaattc cttggaaatt 480
ctttttaaga aaaaattgga gtttnaaaga aataaacccc tttgttaaat gaagcttggc 540
tttttggtga aaaanaatca tcccgcaggg cttattgttt aaaaanggaa ttttaagcct 600
ccctggaaaa anttgttaat taaatgggga aaatgntggg naaaaattat ccgttagggt 660
ttaaagggaa aactta 676

<210> 67
<211> 620
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 419, 493, 519, 568, 605, 610
<223> n = A,T,C or G

<400> 67
caccattaaa gctgcttacc aagaacttcc ccagcatttt gacttccttg tttgatagct 60
gaattgtgag caggtgatag aagagccttt ctagttgaac atacagataa tttgctgaat 120
acattccatt taatgaaggg gttacatctg ttacgaagct actaagaagg agcaagagca 180
taggggaaaa aaatctgatc agaacgcatc aaactcacat gtgccccctc tactacaaac 240
agattgtagt gctgtggtgg tttattccgt tgtgcagaac ttgcaagctg agtcactaaa 300
cccaaagaga ggaaattata ggttagttaa acattgtaat cccaggaact aagtttaatt 360
cacttttgaa gtgttttgtt ttttatttttt ggtttgtctg atttactttg ggggaaaang 420
ctaaaaaaaa agggatatca atctctaatt cagtgcccac taaaagttgt ccctaaaaag 480
tctttactgg aanttatggg actttttaag ctccaggtnt tttggtcctc caaattaacc 540
ttgcatgggc cccttaaaat tgttgaangg cattcctgcc tctaagtttg gggaaaattc 600
ccccnttttn aaaatttgga 620

<210> 68
<211> 551
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 286, 464, 480, 501, 502, 518, 528, 533, 536, 537, 538, 539,
540, 541, 543, 544, 545, 547, 548, 549
<223> n = A,T,C or G

<400> 68
actagtagct ggtacataat cactgaggag ctatttctta acatgctttt atagaccatg 60
ctaatgctag accagtattt aagggctaat ctcacacctc cttagctgta agagtctggc 120
ttagaacaga cctctctgtg caataacttg tggccactgg aaatccctgg gccggcattt 180
gtattggggt tgcaatgact cccaagggcc aaaagagtta aaggcacgac tgggatttct 240
tctgagactg tggtgaaact ccttccaagg ctgagggggt cagtangtgc tctgggaggg 300
actcggcacc actttgatat tcaacaagcc acttgaagcc caattataaa attgttattt 360
tacagctgat ggaactcaat ttgaaccttc aaaactttgt tagtttatcc tattatattg 420
ttaaacctaa ttacatttgt ctagcattgg atttggttcc tgtngcatat gttttttttcn 480
cctatgtgct ccccctcccc nnatcttaat ttaaaccnca attttgcnat tcnccnnnnn 540
nannnannna a 551

<210> 69
<211> 396
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 235, 310, 323, 381
<223> n = A,T,C or G

<400> 69
cagaaatgga aagcagagtt ttcatttctg tttataaacg tctccaaaca aaaatggaaa 60
gcagagtttt cattaaatcc ttttaccttt tttttttctt ggtaatcccc tcaaataaca 120
gtatgtggga tattgaatgt taaagggata tttttttcta ttatttttat aattgtacaa 180
aattaagcaa atgttaaaag ttttatatgc tttattaatg ttttcaaaag gtatnataca 240
tgtgatacat tttttaagct tcagttgctt gtcttctggt actttctgtt atgggctttt 300
ggggagccan aaaccaatct acnatctctt tttgtttgcc aggacatgca ataaaattta 360
aaaaataaat aaaaactatt nagaaattga aaaaaa 396

<210> 70
<211> 536
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 388, 446, 455
<223> n = A,T,C or G

<400> 70

actagtgcaa aagcaaatat aaacatcgaa aaggcgttcc tcacgttagc tgaagatatc 60
cttcgaaaga cccctgtaaa agagcccaac agtgaaaatg tagatatcag cagtggagga 120
ggcgtgacag gctggaagag caaatgctgc tgagcattct cctgttccat cagttgccat 180
ccactacccc gttttctctt cttgctgcaa aataaaccac tctgtccatt tttaactcta 240
aacagatatt tttgtttctc atcttaacta tccaagccac ctattttatt tgttctttca 300
tctgtgactg cttgctgact ttatcataat tttcttcaaa caaaaaaatg tatagaaaaa 360
tcatgtctgt gacttcattt ttaaatgnta cttgctcagc tcaactgcat ttcagttgtt 420
ttatagtcca gttcttatca acattnaaac ctatngcaat catttcaaat ctattctgca 480
aattgtataa gaataaaagt tagaatttaa caattaaaaa aaaaaaaaaa aaaaaa 536

<210> 71
<211> 865
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 22, 35, 39, 56, 131, 138, 146, 183, 194, 197, 238, 269, 277,
282, 297, 316, 331, 336, 340, 341, 346, 349, 370, 376, 381,
382, 392, 396, 397, 401, 433, 444, 445, 454, 455, 469, 472,
477, 480, 482, 489, 497, 499, 511, 522, 526, 527
<223> n = A,T,C or G

<221> misc_feature
<222> 545, 553, 556, 567, 574, 580, 610, 613, 634, 638, 639, 663,
672, 689, 693, 694, 701, 704, 713, 723, 729, 732, 743, 744,
749, 761, 765, 767, 769, 772, 774, 780, 783, 788, 792, 803,
810, 824, 840, 848
<223> n = A,T,C or G

<400> 71
gacaaagcgt taggagaaga anagaggcag ggaanactnc ccaggcacga tggccncctt 60
cccaccagca accagcgccc cccaccagcc cccaggcccg gacgacgaag actccatcct 120
ggattaatct nacctctntc gcctgnccca ttcctacctc ggaggtggag gccggaaagg 180
tcncaccaag aganaanctg ctgccaacac caaccgcccc agccctggcg ggcacganag 240
gaaactggtg accaatctgc agaattctna gaggaanaag cnaggggccc cgcgctnaga 300
cagagctgga tatgangcca gaccatggac nctacncccn ncaatncana cgggactgcg 360
gaagatggan gacccncgac nngatcaggc cngctnncca ncccccccacc cctatgaatt 420
attcccgctg aangaatctc tgannggctt ccannaaagc gcctccccnc cnaacgnaan 480
tncaacatng ggattanang ctgggaactg naaggggcaa ancctnnaat atccccagaa 540
acaanctctc ccnaanaaac tggggcncct catnggtggn accaactatt aactaaaccg 600
cacgccaagn aantataaaa gggggggcccc tccncggnng acccccctttt gtcccttaat 660
ganggttatc cncctgcgt accatggtnc ccnnttctgt ntgnatgttt ccnctcccct 720
ccncctatnt cnagccgaac tcnnatttnc ccgggggtgc natcnantng tncnccttn 780
ttngttgncc cngccctttc cgncggaacn cgtttccccg ttantaacgg cacccggggn 840
aagggtgntt ggcccccctcc ctccc 865

<210> 72
<211> 560
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature

<222> 83, 173, 183, 186, 209, 211, 215, 255, 321, 322, 323, 335,
344, 357, 361, 368, 394, 412, 415, 442, 455, 469, 472, 475,
487, 513, 522, 528, 531, 534, 546
<223> n = A,T,C or G

<400> 72
cctggacttg tcttggttcc agaacctgac gacccggcga cggcgacgtc tcttttgact 60
aaaagacagt gtccagtgct ccngcctagg agtctacggg gaccgcctcc cgcgccgcca 120
ccatgcccaa cttctctggc aactggaaaa tcatccgatc ggaaaacttc gangaattgc 180
tcnaantgct gggggtgaat gtgatgctna ngaanattgc tgtggctgca gcgtccaagc 240
cagcagtgga gatcnaacag gagggagaca ctttctacat caaaacctcc accaccgtgc 300
gcaccacaaa gattaacttc nnngttgggg aggantttga ggancaaact gtggatngga 360
ngcctgtnaa aacctggtga aatgggagaa tganaataaa atggtctgtg ancanaaact 420
cctgaaagga gaaggccccc anaactcctg gaccngaaaa actgacccnc cnatngggga 480
actgatnctt gaaccctgaa cgggcgggat gancctttt tnttgccncc naangggttc 540
tttccntttc cccaaaaaaa 560

<210> 73
<211> 379
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 8, 17, 18, 21, 26, 29, 30, 32, 53, 56, 67, 71, 81, 102, 104,
111, 112, 114, 119, 122, 124, 125, 134, 144, 146, 189, 190,
214, 215, 219, 220, 235, 237, 246, 280, 288, 302, 310, 313,
319, 322, 343, 353, 354
<223> n = A,T,C or G

<400> 73
ctggggancc ggcggtnngc nccatntcnn gncgcgaagg tggcaataaa aanccnctga 60
aaccgcncaa naaacatgcc naagatatgg acgaggaaga tngngctttc nngnacaanc 120
gnanngagga acanaacaaa ctcnangagc tctcaagcta atgccgcggg gaaggggccc 180
ttggccacnn gtggaattaa gaaatctggc aaannngtann tgttccttgt gcctnangag 240
ataagngacc ctttatttca tctgtattta aacctctctn ttccctgnca taacttcttt 300
tnccacgtan agntggaant anttgttgtc ttggactgtt gtncatttta gannaaactt 360
ttgttcaaaa aaaaaataa 379

<210> 74
<211> 437
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 145, 355
<223> n = A,T,C or G

<400> 74
actagttcag actgccacgc caaccccaga aaatacccca catgccagaa aagtgaagtc 60
ctaggtgttt ccatctatgt ttcaatctgt ccatctacca ggcctcgcga taaaaacaaa 120
acaaaaaaac gctgccaggt tttanaagca gttctggtct caaaaccatc aggatcctgc 180
caccagggtt cttttgaaat agtaccacat gtaaaaggga atttggcttt cacttcatct 240

aatcactgaa ttgtcaggct ttgattgata attgtagaaa taagtagcct tctgttgtgg 300
gaataagtta taatcagtat tcatctcttt gttttttgtc actcttttct ctctnattgt 360
gtcatttgta ctgtttgaaa aatatttctt ctataaaatt aaactaacct gccttaaaaa 420
aaaaaaaaaa aaaaaaa 437

<210> 75
<211> 579
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 440, 513, 539, 551
<223> n = A,T,C or G

<400> 75
ctccgtcgcc gccaagatga tgtgcggggc gccctccgcc acgcagccgg ccaccgccga 60
gacccagcac atcgccgacc aggtgaggtc ccagcttgaa gagaaagaaa acaagaagtt 120
ccctgtgttt aaggccgtgt cattcaagag ccaggtggtc gcggggacaa actacttcat 180
caaggtgcac gtcggcgacg aggacttcgt acacctgcga gtgttccaat ctctccctca 240
tgaaaacaag cccttgacct tatctaacta ccagaccaac aaagccaagc atgatgagct 300
gacctatttc tgatcctgac tttggacaag gcccttcagc cagaagactg acaaagtcat 360
cctccgtcta ccagagcgtg cacttgtgat cctaaaataa gcttcatctc cgggctgtgc 420
ccttggggtg gaaggggcan gatctgcact gcttttgcat ttctcttcct aaatttcatt 480
gtgttgattc tttccttcca ataggtgatc ttnattactt tcagaatatt ttccaaatna 540
gatatatttt naaaatcctt aaaaaaaaaa aaaaaaaaa 579

<210> 76
<211> 666
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 411, 470, 476, 491, 506, 527, 560, 570, 632, 636, 643, 650,
654, 658
<223> n = A,T,C or G

<400> 76
gtttatccta tctctccaac cagattgtca gctccttgag ggcaagagcc acagtatatt 60
tccctgtttc ttccacagtg cctaataata ctgtggaact aggttttaat aatttttaa 120
ttgatgttgt tatgggcagg atggcaacca gaccattgtc tcagagcagg tgctggctct 180
ttcctggcta ctccatgttg gctagcctct ggtaacctct tacttattat cttcaggaca 240
ctcactacag ggaccaggga tgatgcaaca tccttgtctt tttatgacag gatgtttgct 300
cagcttctcc aacaataaaa agcacgtggt aaaacacttg cggatattct ggactgtttt 360
taaaaaatat acagtttacc gaaaatcata ttatcttaca atgaaaagga ntttatagat 420
cagccagtga acaacctttt cccaccatac aaaaattcct tttcccgaan gaaaanggct 480
ttctcaataa ncctcacttt cttaanatct tacaagatag ccccganatc ttatcgaaac 540
tcattttagg caaatatgan ttttattgtn cgttacttgt ttcaaaattt ggtattgtga 600
atatcaatta ccacccccat ctcccatgaa anaaanggga aanggtgaan ttcntaancg 660
cttaaa 666

<210> 77
<211> 396

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 31, 54, 125, 128, 136, 163, 168, 198
<223> n = A,T,C or G

<400> 77
ctgcagcccg ggggatccac taatctacca nggttatttg gcagctaatt ctanatttgg 60
atcattgccc aaagttgcac ttgctggtct cttgggattt ggccttggaa aggtatcata 120
catanganta tgccanaata aattccattt ttttgaaaat canctccntg gggctggttt 180
tggtccacag cataacangc actgcctcct tacctgtgag gaatgcaaaa taaagcatgg 240
attaagtgag aagggagact ctcagccttc agcttcctaa attctgtgtc tgtgactttc 300
gaagtttttt aaacctctga atttgtacac atttaaaatt tcaagtgtac tttaaaataa 360
aatacttcta atgggaacaa aaaaaaaaaa aaaaaa 396

<210> 78
<211> 793
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 309, 492, 563, 657, 660, 703, 708, 710, 711, 732, 740, 748,
758, 762, 765, 787
<223> n = A,T,C or G

<400> 78
gcatcctagc cgccgactca cacaaggcag gtgggtgagg aaatccagag ttgccatgga 60
gaaaattcca gtgtcagcat tcttgctcct tgtggccctc tcctacactc tggccagaga 120
taccacagtc aaacctggag ccaaaaagga cacaaaggac tctcgaccca aactgcccca 180
gaccctctcc agaggttggg gtgaccaact catctggact cagacatatg aagaagctct 240
atataaatcc aagacaagca acaaaccctt gatgattatt catcacttgg atgagtgccc 300
acacagtcna gctttaaaga aagtgtttgc tgaaaataaa gaaatccaga aattggcaga 360
gcagtttgtc ctcctcaatc tggtttatga aacaactgac aaacaccttt ctcctgatgg 420
ccagtatgtc ccaggattat gtttgttgac ccatctctga cagttgaagc cgatatcctg 480
ggaagatatt cnaaccgtct ctatgcttac aaactgcaga tacgctctgt tgcttgacac 540
atgaaaaagc tctcaagttg ctnaaaatga attgtaagaa aaaaaatctc cagccttctg 600
tctgtcggct tgaaaattga aaccagaaaa atgtgaaaaa tggctattgt ggaacanatn 660
gacacctgat taggttttgg ttatgttcac cactattttt aanaaaanan nttttaaaat 720
ttggttcaat tntctttttn aaacaatntg tttctacntt gnganctgat ttctaaaaaa 780
aataatnttt ggc 793

<210> 79
<211> 456
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 89, 195, 255, 263, 266, 286, 353, 384, 423, 425, 436, 441
<223> n = A,T,C or G

<400> 79
actagtatgg ggtgggaggc cccacccttc tcccctaggc gctgttcttg ctccaaaggg 60
ctccgtggag agggactggc agagctgang ccacctgggg ctggggatcc cactcttctt 120
gcagctgttg agcgcaccta accactggtc atgcccccac ccctgctctc cgcacccgct 180
tcctcccgac cccangacca ggctacttct cccctcctct tgcctccctc ctgcccctgc 240
tgcctctgat cgtangaatt gangantgtc ccgccttgtg gctganaatg gacagtggca 300
ggggctggaa atgggtgtgt gtgtgtgtgt gtgtgtgtgt gtgtgtgtgt gcnccccccc 360
tgcaagaccg agattgaggg aaancatgtc tgctgggtgt gaccatgttt cctctccata 420
aantncccct gtgacnctca naaaaaaaaa aaaaaa 456

<210> 80
<211> 284
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 283
<223> n = A,T,C or G

<400> 80
ctttgtacct ctagaaaaga taggtattgt gtcatgaaac ttgagtttaa attttatata 60
taaaactaaa agtaatgctc actttagcaa cacatactaa aattggaacc atactgagaa 120
gaatagcatg acctccgtgc aaacaggaca agcaaatttg tgatgtgttg attaaaaaga 180
aataaataaa tgtgtatatg tgtaacttgt atgtttatgt ggaatacaga ttgggaaata 240
aaatgtattt cttactgtga aaaaaaaaaa aaaaaaaaaa aana 284

<210> 81
<211> 671
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 388, 505, 600, 603, 615, 642, 644, 660
<223> n = A,T,C or G

<400> 81
gccaccaaca ttccaagcta ccctgggtac ctttgtgcag tagaagctag tgagcatgtg 60
agcaagcggt gtgcacacgg agactcatcg ttataattta ctatctgcca agagtagaaa 120
gaaaggctgg ggatatttgg gttgqcttgg ttttgatttt ttgcttgttt gtttgttttg 180
tactaaaaca gtattatctt ttgaatatcg tagggacata agtatataca tgttatccaa 240
tcaagatggc tagaatggtg cctttctgag tgtctaaaac ttgacacccc tggtaaatct 300
ttcaacacac ttccactgcc tgcgtaatga agttttgatt catttttaac cactggaatt 360
tttcaatgcc gtcattttca gttagatnat tttgcacttt gagattaaaa tgccatgtct 420
atttgattag tcttatttttt ttatttttac aggcttatca gtctcactgt tggctgtcat 480
tgtgacaaag tcaaataaac ccccnaggac aacacacagt atgggatcac atattgtttg 540
acattaagct ttggccaaaa aatgttgcat gtgttttacc tcgacttgct aaatcaatan 600
canaaaggct ggctnataat gttggtggtg aaataattaa tnantaacca aaaaaaaaan 660
aaaaaaaaaa a 671

<210> 82
<211> 217
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 35
<223> n = A,T,C or G

<400> 82
ctgcagatgt ttcttgaatg ctttgtcaaa ttaanaaagt taaagtgcaa taatgtttga 60
agacaataag tggtggtgta tcttgtttct aataagataa actttttttgt ctttgcttta 120
tcttattagg gagttgtatg tcagtgtata aaacatactg tgtggtataa caggcttaat 180
aaattcttta aaaggaaaaa aaaaaaaaaa aaaaaaa 217

<210> 83
<211> 460
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 104, 118, 172, 401, 422, 423, 444, 449
<223> n = A,T,C or G

<400> 83
cgcgagtggg agcaccagga tctcgggctc ggaacgagac tgcacggatt gttttaagaa 60
aatggcagac aaaccagaca tgggggaaat cgccagcttc gatnaggcca agctgaanaa 120
aacggagacg caggagaaga acaccctgcc gaccaaagag accattgagc angagaagcg 180
gagtgaaatt tcctaagatc ctggaggatt tcctaccccc gtcctcttcg agaccccagt 240
cgtgatgtgg aggaagagcc acctgcaaga tggacacgag ccacaagctg cactgtgaac 300
ctgggcactc cgcgccgatg ccaccggcct gtgggtctct gaagggaccc cccccaatcg 360
gactgccaaa ttctccggtt tgccccggga tattatacaa nattatttgt atgaataatg 420
annataaaac acacctcgtg gcancaaana aaaaaaaaaa 460

<210> 84
<211> 323
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 70, 138, 178, 197, 228, 242, 244, 287, 311
<223> n = A,T,C or G

<400> 84
tggtggatct tggctctgtg gagctgctgg gacgggatct aaaagactat tctggaagct 60
gtggtccaan gcattttgct ggcttaacgg gtcccggaac aaaggacacc agctctctaa 120
aattgaagtt tacccganat aacaatcttt tgggcagaga tgcctatttt aacaaacncc 180
gtccctgcgc aacaacnaac aatctctggg aaataccggc catgaacntg ctgtctcaat 240
cnancatctc tctagctgac cgatcatatc gtcccagatt actacanatc ataataattg 300
atttcctgta naaaaaaaaa aaa 323

<210> 85
<211> 771
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 63, 426, 471, 497, 521, 554, 583, 586, 606, 609, 615, 652,
686, 691, 694, 695, 706, 713, 730, 732, 743, 751
<223> n = A,T,C or G

<400> 85
aaactgggta ctcaacactg agcagatctg ttctttgagc taaaaaccat gtgctgtacc 60
aanagtttgc tcctggctgc tttgatgtca gtgctgctac tccacctctg cggcgaatca 120
gaagcaagca actttgactg ctgtcttgga tacacagacc gtattcttca tcctaaattt 180
attgtgggct tcacacggca gctggccaat gaaggctgtg acatcaatgc tatcatcttt 240
cacacaaaga aaaagttgtc tgtgtgcgca aatccaaaac agacttgggt gaaatatatt 300
gtgcgtctcc tcagtaaaaa agtcaagaac atgtaaaaac tgtggctttt ctggaatgga 360
attggacata gcccaagaac agaaagaact tgctggggtt ggaggtttca cttgcacatc 420
atgganggtt tagtgcttat cttatttgtg cctcctggac ttgtccaatt natgaagtta 480
atcatattgc atcatanttt gctttgttta acatcacatt naaattaaac tgtattttat 540
gttatttata gctntaggtt ttctgtgttt aacttttttat acnaantttc ctaaactatt 600
ttggtntant gcaanttaaa aattatattt ggggggggaa taaatattgg antttctgca 660
gccacaagct ttttttaaaa aaccantaca nccnngttaa atggtnggtc ccnaatggtt 720
tttgcttttn antagaaaat ttnttagaac natttgaaaa aaaaaaaaaa a 771

<210> 86
<211> 628
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 162, 249, 266, 348, 407, 427, 488, 518, 545, 566, 569, 597,
598, 611, 617, 621, 624
<223> n = A,T,C or G

<400> 86
actagtttgc tttacatttt tgaaaagtat tatttttgtc caagtgctta tcaactaaac 60
cttgtgttag gtaagaatgg aatttattaa gtgaatcagt gtgacccttc ttgtcataag 120
attatcttaa agctgaagcc aaaatatgct tcaaaagaaa angactttat tgttcattgt 180
agttcataca ttcaaagcat ctgaactgta gtttctatag caagccaatt acatccataa 240
gtggagaang aaatagatta atgtcnaagt atgattggtg gagggagcaa ggttgaagat 300
aatctggggt tgaaattttc tagttttcat tctgtacatt tttagttnga catcagattt 360
gaaatattaa tgtttacctt tcaatgtgtg gtatcagctg gactcantaa cacccctttc 420
ttccctnggg gatggggaat ggattattgg aaaatggaaa gaaaaaagta cttaaagcct 480
tcctttcnca gtttctggct cctaccctac tgatttancc agaataagaa aacattttat 540
catcntctgc tttattccca ttaatnaant tttgatgaat aaatctgctt ttatgcnnac 600
ccaaggaatt nagtggnttc ntcnttgt 628

<210> 87
<211> 518
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature

<222> 384, 421, 486
<223> n = A,T,C or G

<400> 87
tttttttattt tttttagaga gtagttcagc ttttatttat aaatttattg cctgttttat 60
tataacaaca ttatactgtt tatggtttaa tacatatggt tcaaaatgta taatacatca 120
agtagtacag ttttaaaatt ttatgcttaa aacaagtttt gtgtaaaaaa tgcagataca 180
ttttacatgg caaatcaatt tttaagtcat cctaaaaatt gatttttttt tgaaatttaa 240
aaacacattt aatttcaatt tctctcttat ataaccttta ttactatagc atggtttcca 300
ctacagttta acaatgcagc aaaattccca tttcacggta aattgggttt taagcggcaa 360
ggttaaaatg ctttgaggat cctnaatacc ctttgaactt caaatgaagg ttatggttgt 420
naatttaacc ctcatgccat aagcagaagc acaagtttag ctgcattttg ctctaaactg 480
taaaancgag ccccccgttg aaaaagcaaa agggaccc 518

<210> 88
<211> 1844
<212> DNA
<213> Homo sapiens

<400> 88
gagacagtga atcctagtat caaaggattt ttggcctcag aaaaagttgt tgattatttt 60
tattttattt tatttttcga gactccgtct caaaaaaaaa aaaaaaaaaa agaatcacaa 120
ggtatttgct aaagcatttt gagctgcttg gaaaaaggga agtagttgca gtagagtttc 180
ttccatcttc ttggtgctgg gaagccatat atgtgtcttt tactcaagct aaggggtata 240
agcttatgtg ttgaatttgc tacatctata tttcacatat tctcacaata agagaatttt 300
gaaatagaaa tatcatagaa catttaagaa agtttagtat aaataatatt ttgtgtgttt 360
taatcccttt gaagggatct atccaaagaa aatattttac actgagctcc ttcctacacg 420
tctcagtaac agatcctgtg ttagtctttg aaaatagctc atttttaaa tgtcagtgag 480
tagatgtagc atacatatga tgtataatga cgtgtattat gttaacaatg tctgcagatt 540
ttgtaggaat acaaaacatg gccttttta taagcaaaac gggccaatga ctagaataac 600
acatagggca atctgtgaat atgtattata agcagcattc cagaaaagta gttggtgaaa 660
taattttcaa gtcaaaaagg gatatggaaa gggaattatg agtaacctct atttttaag 720
ccttgctttt aaattaaacg ctacagccat ttaagccttg aggataataa agcttgagag 780
taataatgtt aggttagcaa aggtttagat gtatcacttc atgcatgcta ccatgatagt 840
aatgcagctc ttcgagtcat ttctggtcat tcaagatatt cacccttttg cccatagaaa 900
gcaccctacc tcacctgctt actgacattg tcttagctga tcacaagatc attatcagcc 960
tccattattc cttactgtat ataaaataca gagttttata ttttcctttc ttcgtttttc 1020
accatattca aaacctaaat ttgtttttgc agatggaatg caaagtaatc aagtgttcgt 1080
gctttcacct agaagggtgt ggtcctgaag gaaagaggtc cctaaatatc ccccaccctg 1140
ggtgctcctc cttccctggt accctgacta ccagaagtca ggtgctagag cagctggaga 1200
agtgcagcag cctgtgcttc cacagatggg ggtgctgctg caacaaggct ttcaatgtgc 1260
ccatcttagg gggagaagct agatcctgtg cagcagcctg gtaagtcctg aggaggttcc 1320
attgctcttc ctgctgctgt cctttgcttc tcaacggggc tcgctctaca gtctagagca 1380
catgcagcta acttgtgcct ctgcttatgc atgagggtta aattaacaac cataaccttc 1440
atttgaagtt caaaggtgta ttcaggatcc tcaaagcatt ttaaccttgc cgcttaaaac 1500
ccaatttacc gtgaaatggg aattttgctg cattgttaaa ctgtagtgga aaccatgcta 1560
tagtaataaa ggttatataa gagagaaatt gaaattaaat gtgtttttaa atttcaaaaa 1620
aaaatcaatc tttaggatga cttaaaaatt gatttgccat gtaaaatgta tctgcatttt 1680
ttacacaaaa cttgttttaa gcataaaatt ttaaaactgt actacttgat gtattataca 1740
ttttgaacca tatgtattaa accataaaca gtataatgtt gttataataa aacaggcaat 1800
aaatttataa ataaaagctg aaaaaaaaaa aaaaaaaaaa aaaa 1844

<210> 89
<211> 523

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 288, 352, 369, 398, 475, 511, 513
<223> n = A,T,C or G

<400> 89
ttttttttttt ttttttagt caatccacat ttattgatca cttattatgt accaggcact 60
gggataaaga tgactgttag tcactcacag taaggaagaa aactagcaaa taagacgatt 120
acaatatgat gtagaaaatg ctaagccaga gatatagaaa ggtcctattg ggtccttctg 180
tcaccttgtc tttccacatc cctacccttc acaggccttc cctccagctt cctgcccccg 240
ctccccactg cagatcccct gggattttgc ctagagctaa acgagganat gggccccctg 300
gccctggcat gacttgaacc caaccacaga ctgggaaagg gagcctttcg anagtggatc 360
actttgatna gaaaacacat agggaattga agagaaantc cccaaatggc cacccgtgct 420
ggtgctcaag aaaagtttgc agaatggata aatgaaggat caagggaatt aatanatgaa 480
taattgaatg gtggctcaat aagaatgact ncnttgaatg acc 523

<210> 90
<211> 604
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 563
<223> n = A,T,C or G

<400> 90
ccagtgtggt ggaatgcaaa gattaccccg gaagctttcg agaagctggg attccctgca 60
gcaaaggaaa tagccaatat gtgtcgtttc tatgaaatga agccagaccg agatgtcaat 120
ctcacccacc aactaaatcc caaagtcaaa agcttcagcc agtttatctc agagaaccag 180
gggagccttc aagggcatgt agaaaatcag ctgttcagat aggcctctgc accacacagc 240
ctctttcctc tctgatcctt ttcctcttta cggcacaaca ttcatgtttg acagaacatg 300
ctggaatgca attgtttgca acaccgaagg atttcctgcg gtcgcctctt cagtaggaag 360
cactgcattg gtgataggac acggtaattt gattcacatt taacttgcta gttagtgata 420
aggggtggta cacctgtttg gtaaaatgag aagcctcgga aacttgggag cttctctcct 480
accactaatg gggagggcag attattactg ggatttctcc tggggtgaat taatttcaag 540
ccctaattgc tgaaattccc ctnggcaggc tccagttttc tcaactgcat tgcaaaattc 600
cccc 604

<210> 91
<211> 858
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 570, 591, 655, 664, 667, 683, 711, 759, 760, 765, 777, 787,
792, 794, 801, 804, 809, 817, 820
<223> n = A,T,C or G

<400> 91

tttttttttt ttttttttta tgattattat ttttttttatt gatctttaca tcctcagtgt 60
tggcagagtt tctgatgctt aataaacatt tgttctgatc agataagtgg aaaaaattgt 120
catttcctta ttcaagccat gcttttctgt gatattctga tcctagttga acatacagaa 180
ataaatgtct aaaacagcac ctcgattctc gtctataaca ggactaagtt cactgtgatc 240
ttaaataagc ttggctaaaa tgggacatga gtggaggtag tcacacttca gcgaagaaag 300
agaatctcct gtataatctc accaggagat tcaacgaatt ccaccacact ggactagtgg 360
atccccccggg ctgcaggaat tcgatatcaa gcttatcgat accgtcgacc tcgaggggggg 420
gcccggtacc caattcgccc tatagtgagt cgtattacgc gcgctcactg gccgtcgttt 480
tacaacgtcg tgactgggaa aaccctggcg ttacccaact taatcgcctt gcagcacatc 540
ccccttcgc cagctggcgt aatagcgaan agcccgcacc gatcgccctt ncaacagttg 600
cgcagcctga atggcgaatg ggacgcgccc tgtagcggcg cattaaagcg cggcngggtg 660
tggnggntcc cccacgtgac cgntacactt ggcagcgcct tacgccggtc nttcgctttc 720
ttcccttcct ttctcgcacc gttcgccggg tttccccgnn agctnttaat cgggggnctc 780
cctttanggg tncnaattaa nggnttacng gaccttngan cccaaaaact ttgattaggg 840
ggaaggtccc cgaagggg 858

<210> 92
<211> 585
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 317, 319, 320, 321, 325, 327, 328, 330, 331, 332, 460, 462,
483, 485, 487, 523, 538, 566, 584
<223> n = A,T,C or G

<400> 92
gttgaatctc ctggtgagat tatacaggag attctctttc ttcgctgaag tgtgactacc 60
tccactcatg tcccatttta gccaagctta tttaagatca cagtgaactt agtcctgtta 120
tagacgagaa tcgaggtgct gttttagaca tttatttctg tatgttcaac taggatcaga 180
atatcacaga aaagcatggc ttgaataagg aaatgacaat ttttttccact tatctgatca 240
gaacaaatgt ttattaagca tcagaaactc tgccaacact gaggatgtaa agatcaataa 300
aaaaaataat aatcatnann naaanannan nngaagggcg gccgccaccg cggtggagct 360
ccagcttttg ttccctttag tgagggttaa ttgcgcgctt ggcgttaatc atggtcatag 420
ctgtttcctg tgtgaaattg ttatccggct cacaattccn cncaacatac gagccgggaa 480
gcntnangtg taaaagcctg ggggtgccta attgagtgag ctnactcaca ttaattgngt 540
tgcgctccac ttgcccgctt ttccantccg ggaaacctgt tcgnc 585

<210> 93
<211> 567
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 82, 158, 230, 232, 253, 266, 267, 268, 269, 270, 271, 272,
273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284,
285, 286, 287, 295, 303, 307, 314, 349, 352, 354, 356, 366,
369, 379, 382, 386, 393, 404, 427, 428, 446, 450, 452
<223> n = A,T,C or G

<221> misc_feature
<222> 453, 454, 459, 462, 480, 481, 483, 488, 493, 501, 509, 511,

512, 518, 520, 525, 526, 532, 541, 557
<223> n = A,T,C or G

<400> 93
cggcagtgtt gctgtctgcg tgtccacctt ggaatctggc tgaactggct gggaggacca 60
agactgcggc tggggtgggc anggaaggga accgggggct gctgtgaagg atcttggaac 120
ttccctgtac ccaccttccc cttgcttcat gtttgtanag gaaccttgtg ccggccaagc 180
ccagtttcct tgtgtgatac actaatgtat ttgctttttt tgggaaatan anaaaaatca 240
attaaattgc tantgtttct ttgaannnnn nnnnnnnnnn nnnnnnnggg ggggncgccc 300
ccncggngga aacnccccct tttgttccct ttaattgaaa ggttaattng cncncntggc 360
gttaanccnt gggccaaanc tngttncccg tgntgaaatt gttnatcccc tcccaaattc 420
ccccccnncc ttccaaaccc ggaaancctn annntgttna ancccggggg gttgcctaan 480
ngnaattnaa ccnaaccccc ntttaaatng nntttgcncn ccacnngccc cnctttccca 540
nttcggggaa aaccctntcc gtgccca 567

<210> 94
<211> 620
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 169, 171, 222, 472, 528, 559, 599
<223> n = A,T,C or G

<400> 94
actagtcaaa aatgctaaaa taatttggga gaaaatattt tttaagtagt gttatagttt 60
catgtttatc ttttattatg ttttgtgaag ttgtgtcttt tcactaatta cctatactat 120
gccaatattt ccttatatct atccataaca tttatactac atttgtaana naatatgcac 180
gtgaaactta acactttata aggtaaaaat gaggtttcca anatttaata atctgatcaa 240
gttcttgtta tttccaaata gaatggactt ggtctgttaa gggctaagga gaagaggaag 300
ataaggttaa aagttgttaa tgaccaaaca ttctaaaaga aatgcaaaaa aaaagtttat 360
tttcaagcct tcgaactatt taaggaaagc aaaatcattt cctaaatgca tatcatttgt 420
gagaatttct cattaatatc ctgaatcatt catttcacta aggctcatgt tnactccgat 480
atgtctctaa gaaagtacta tttcatggtc caaacctggt tgccatantt gggtaaaggc 540
tttcccttaa gtgtgaaant atttaaaatg aaattttcct ctttttaaaa attctttana 600
agggttaagg gtgttgggga 620

<210> 95
<211> 470
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 61, 67, 79, 89, 106, 213, 271, 281, 330, 354, 387, 432, 448
<223> n = A,T,C or G

<400> 95
ctcgaccttc tctgcacagc ggatgaaccc tgagcagctg aagaccagaa aagccactat 60
nactttntgc ttaattcang agcttacang attcttcaaa gagtgngtcc agcatccttt 120
gaaacatgag ttcttaccag cagaagcaga cctttacccc accacctcag cttcaacagc 180
agcaggtgaa acaacccatc cagcctccac ctnaggaaat atttgttccc acaaccaagg 240
agccatgcca ctcaaaggtt ccacaacctg naaacacaaa nattccagag ccaggctgta 300

ccaaggtccc tgagccaggg ctgtaccaan gtccctgagc caggttgtac caangtccct 360
gagccaggat gtaccaaggt ccctgancca ggttgtccaa ggtccctgag ccaggctaca 420
ccaagggcct gngccaggca gcatcaangt ccctgaccaa ggcttatcaa 470

<210> 96
<211> 660
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 299, 311, 360, 426, 538, 540, 542, 553, 563, 565, 592, 603,
604, 618, 633, 647, 649, 651, 653
<223> n = A,T,C or G

<400> 96
ttttttttnt ttttttttnt ggaattaaaa gcaatttaat gagggcagag caggaaacat 60
gcatttcttt tcattcgaat cttcagatga accctgagca gccgaagacc agaaaagcca 120
tgaagacttt ctgcttaatt caggggctta caggattctt cagagtgtgt gtgaacaaaa 180
gctttatagt acgtattttt aggatacaaa taagagagag actatggctt ggggtgagaa 240
tgtactgatt acaaggtcta cagacaatta agacacagaa acagatggga agagggtgnc 300
cagcatctgg nggttggctt ctcaagggct tgtctgtgca ccaaattact tctgcttggn 360
cttctgctga gctgggcctg gagtgaccgt tgaaggacat ggctctggta cctttgtgta 420
gcctgncaca ggaactttgg tgtatccttg ctcaggaact ttgatggcac ctggctcagg 480
aaacttgatg aagccttggt caagggacct tgatgcttgc tggctcaggg accttggngn 540
ancctgggct canggacctt tgncncaacc ttggcttcaa gggacccttg gnacatcctg 600
gcnnagggac ccttgggncc aaccctgggc ttnagggacc ctttggntnc nanccttggc 660

<210> 97
<211> 441
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 12, 308
<223> n = A,T,C or G

<400> 97
gggaccatac anagtattcc tctcttcaca ccaggaccag ccactgttgc agcatgagtt 60
cccagcagca gaagcagccc tgcatcccac cccctcagct tcagcagcag caggtgaaac 120
agccttgcca gcctccacct caggaaccat gcatccccaa aaccaaggag ccctgccacc 180
ccaaggtgcc tgagccctgc caccccaaag tgcctgagcc ctgccagccc aaggttccag 240
agccatgcca ccccaaggtg cctgagccct gcccttcaat agtcactcca gcaccagccc 300
agcagaanac caagcagaag taatgtggtc cacagccatg cccttgagga gccggccacc 360
agatgctgaa tcccctatcc cattctgtgt atgagtccca tttgccttgc aattagcatt 420
ctgtctcccc caaaaaaaaa a 441

<210> 98
<211> 600
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 295, 349, 489, 496, 583
<223> n = A,T,C or G

<400> 98
gtattcctct cttcacacca ggaccagcca ctgttgcagc atgagttccc agcagcagaa 60
gcagccctgc atcccacccc ctcagcttca gcagcagcag gtgaaacagc cttgccagcc 120
tccacctcag gaaccatgca tccccaaaac caaggagccc tgccacccca aggtgcctga 180
gccctgccac cccaaagtgc ctgagccctg ccagcccaag gttccagagc catgccaccc 240
caaggtgcct gagccctgcc cttcaatagt cactccagca ccagcccagc agaanaccaa 300
gcagaagtaa tgtggtccac agccatgccc ttgaggagcc ggccaccana tgctgaatcc 360
cctatcccat tctgtgtatg agtcccattt gccttgcaat tagcattctg tctcccccaa 420
aaaagaatgt gctatgaagc tttctttcct acacactctg agtctctgaa tgaagctgaa 480
ggtcttaant acaganctag ttttcagctg ctcagaattc tctgaagaaa agatttaaga 540
tgaaaggcaa atgattcagc tccttattac cccattaaat tcnctttcaa ttccaaaaaa 600

<210> 99
<211> 667
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 345, 562, 635
<223> n = A,T,C or G

<400> 99
actagtgact gagttcctgg caaagaaatt tgacctggac cagttgataa ctcatgtttt 60
accatttaaa aaaatcagtg aaggatttga gctgctcaat tcaggacaaa gcattcgaac 120
ggtcctgacg ttttgagatc caaagtggca ggaggtctgt gttgtcatgg tgaactggag 180
tttctcttgt gagagttccc tcatctgaaa tcatgtatct gtctcacaaa tacaagcata 240
agtagaagat ttgttgaaga catagaaccc ttataaagaa ttattaacct ttataaacat 300
ttaaagtctt gtgagcacct gggaattagt ataataacaa tgttnatatt tttgatttac 360
attttgtaag gctataattg tatcttttaa gaaaacatac cttggatttc tatgttgaaa 420
tggagatttt taagagtttt aaccagctgc tgcagatata ttactcaaaa cagatatagc 480
gtataaagat atagtaaatg catctcctag agtaatattc acttaacaca ttggaaacta 540
ttatttttta gatttgaata tnaatgttat tttttaaaca cttgttatga gttacttggg 600
attacatttt gaaatcagtt cattccatga tgcanattac tgggattaga ttaagaaaga 660
cggaaaa 667

<210> 100
<211> 583
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 404, 506, 514, 527, 528, 538, 548, 556, 568, 569
<223> n = A,T,C or G

<400> 100
gttttgtttg taagatgatc acagtcatgt tacactgatc taaaggacat atatataacc 60

ctttaaaaaa aaaatcactg cctcattctt atttcaagat gaatttctat acagactaga 120
tgtttttctg aagatcaatt agacattttg aaaatgattt aaagtgtttt ccttaatgtt 180
ctctgaaaac aagtttcttt tgtagtttta accaaaaaag tgccctttt gtcactggat 240
tctcctagca ttcatgattt ttttttcata caatgaaatt aaaattgcta aaatcatgga 300
ctggctttct ggttggattt caggtaagat gtgtttaagg ccagagcttt tctcagtatt 360
tgatttttt ccccaatatt tgatttttta aaaatataca catnggtgct gcatttatat 420
ctgctggttt aaaattctgt catatttcac ttctagcctt ttagttatgg caaatcatat 480
tttactttta cttaaagcat ttggtnattt ggantatctg gttctannct aaaaaaanta 540
attctatnaa ttgaantttt ggtactcnnc catatttgga tcc 583

<210> 101
<211> 592
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 218, 497, 502, 533, 544, 546, 548, 550, 555
<223> n = A,T,C or G

<400> 101
gtggagacgt acaaagagca gccgctcaag acacctggga agaaaaagaa aggcaagccc 60
gggaaacgca aggagcagga aaagaaaaaa cggcgaactc gctctgcctg gttagactct 120
ggagtgactg ggagtgggct agaaggggac cacctgtctg acacctccac aacgtcgctg 180
gagctcgatt cacggaggca ttgaaatttt cagcaganac cttccaagga catattgcag 240
gattctgtaa tagtgaacat atggaaagta ttagaaatat ttattgtctg taaatactgt 300
aaatgcattg gaataaaact gtctccccca ttgctctatg aaactgcaca ttggtcattg 360
tgaatatttt tttttttgcc aaggctaatc caattattat tatcacattt accataattt 420
attttgtcca ttgatgtatt tattttgtaa atgtatcttg gtgctgctga atttctatat 480
tttttgtaca taatgcnttt anatatacct atcaagtttg ttgataaatg acncaatgaa 540
gtgncncnan ttggnggttg aatttaatga atgcctaatt ttattatccc aa 592

<210> 102
<211> 587
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 91, 131, 256, 263, 332, 392, 400, 403, 461, 496, 497, 499,
510, 511, 518, 519, 539, 554, 560, 576
<223> n = A,T,C or G

<400> 102
cgtcctaagc acttagacta catcagggaa gaacacagac cacatccctg tcctcatgcg 60
gcttatgttt tctggaagaa agtggagacc nagtccttgg ctttagggct ccccggctgg 120
gggctgtgca ntccggtcag ggcgggaagg gaaatgcacc gctgcatgtg aacttacagc 180
ccaggcggat gcccccttccc ttagcactac ctggcctcct gcatcccctc gcctcatgtt 240
cctcccacct tcaaanaatg aanaacccca tgggcccagc cccttgccct ggggaaccaa 300
ggcagccttc caaaactcag gggctgaagc anactattag ggcaggggct gactttgggt 360
gacactgccc attccctctc agggcagctc angtcacccn ggnctcttga acccagcctg 420
ttcctttgaa aaagggcaaa actgaaaagg gcttttccta naaaaagaaa aaccagggaa 480
ctttgccagg gcttcnntnt taccaaaacn ncttctcnng gatttttaat tccccattng 540
gcctccactt accnggggcn atgccccaaa attaanaatt tcccatc 587

<210> 103
<211> 496
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2, 17, 66, 74, 82, 119, 164, 166, 172, 200, 203, 228, 232,
271, 273, 415, 423, 445, 446, 473
<223> n = A,T,C or G

<400> 103
anaggactgg ccctacntgc tctctctcgt cctacctatc aatgcccaac atggcagaac 60
ctgcanccct tggncactgc anatggaaac ctctcagtgt cttgacatca ccctacccnt 120
gcggtgggtc tccaccacaa ccactttgac tctgtggtcc ctgnanggtg gnttctcctg 180
actggcagga tggaccttan ccnacatatc cctctgttcc ctctgctnag anaaagaatt 240
cccttaacat gatataatcc acccatgcaa ntngctactg gcccagctac catttaccat 300
ttgcctacag aatttcattc agtctacact ttggcattct ctctggcgat agagtgtggc 360
tgggctgacc gcaaaaggtg ccttacacac tggcccccac cctcaaccgt tgacncatca 420
gangcttgcc tcctccttct gattnncccc catgttggat atcagggtgc tcnagggatt 480
ggaaaagaaa caaaac 496

<210> 104
<211> 575
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 18, 19, 45, 68, 77, 132, 155, 174, 219, 226, 238, 259, 263,
271, 273, 306, 323, 339, 363, 368, 370, 378, 381, 382, 436,
440, 449, 450, 456, 481, 485, 496, 503, 510, 512, 515, 528,
542, 552
<223> n = A,T,C or G

<400> 104
gcacctgctc tcaatccnnc tctcaccatg atcctccgcc tgcanaaact cctctgccaa 60
ctatggangt ggtttcnggg gtggctcttg ccaactggga agaagccgtg gtgtctctac 120
ctgttcaact cngtttgtgt ctgggggatc aactnggggc tatggaagcg gctnaactgt 180
tgttttggtg gaagggctgg taattggctt tgggaagtng cttatngaaq ttggcctngg 240
gaagttgcta ttgaaagtng ccntggaagt ngntttggtg gggggttttg ctggtggcct 300
ttgttnaatt tgggtgcttt gtnaatggcg gccccctcnc ctgggcaatg aaaaaaatca 360
ccnatgcngn aaacctcnac nnaacagcct gggcttccct cacctcgaaa aaagttgctc 420
ccccccccaaa aaaggncaan cccctcaann tggaangttg aaaaaatcct cgaatgggga 480
ncccnaaaac aaaaancccc ccntttcccn gnaanggggg aaataccncc cccccactta 540
cnaaaaccct tntaaaaaac cccccgggaa aaaaa 575

<210> 105
<211> 619
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> 260, 527, 560, 564, 566, 585, 599
<223> n = A,T,C or G

<400> 105
cactagtagg atagaaacac tgtgtcccga gagtaaggag agaagctact attgattaga 60
gcctaaccca ggttaactgc aagaagaggc gggatacttt cagctttcca tgtaactgta 120
tgcataaagc caatgtagtc cagtttctaa gatcatgttc caagctaact gaatcccact 180
tcaatacaca ctcatgaact cctgatggaa caataacagg cccaagcctg tggtatgatg 240
tgcacacttg ctagactcan aaaaaatact actctcataa atgggtggga gtattttggt 300
gacaacctac tttgcttggc tgagtgaagg aatgatattc atatattcat ttattccatg 360
gacatttagt tagtgctttt tatataccag gcatgatgct gagtgacact cttgtgtata 420
tttccaaatt tttgtacagt cgctgcacat atttgaaatc atatattaag acttccaaaa 480
aatgaagtcc ctggtttttc atggcaactt gatcagtaaa ggattcncct ctgtttggta 540
cttaaaacat ctactatatn gttnanatga aattcctttt ccccncctcc cgaaaaaana 600
aagtggtggg gaaaaaaaa 619

<210> 106
<211> 506
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 8, 21, 31, 32, 58, 75, 89, 96, 99, 103, 122, 126, 147, 150,
158, 195, 210, 212, 219, 226, 246, 248, 249, 255, 258, 261,
263, 265, 275, 304, 317, 321, 331, 337, 340, 358, 371, 377,
380, 396, 450, 491
<223> n = A,T,C or G

<400> 106
cattggtnct ttcatttgct ntggaagtgt nnatctctaa cagtggacaa agttcccngt 60
gccttaaact ctgtnacact tttgggaant gaaaanttng tantatgata ggttattctg 120
angtanagat gttctggata ccattanatn tgccccngt gtcagaggct catattgtgt 180
tatgtaaatg gtatntcatt cgctactatn antcaattng aaatanggtc tttgggttat 240
gaatantnng cagcncanct nanangctgt ctgtngtatt cattgtggtc atagcacctc 300
acancattgt aacctcnatc nagtgagaca nactagnaan ttcctagtga tggctcanga 360
ttccaaatgg nctcatntcn aatgtttaaa agttanttaa gtgtaagaaa tacagactgg 420
atgttccacc aactagtacc tgtaatgacn ggcctgtccc aacacatctc ccttttccat 480
gactgtggta ncccgcatcg gaaaaa 506

<210> 107
<211> 452
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 289, 317, 378
<223> n = A,T,C or G

<400> 107
gttgagtctg tactaaacag taagatatct caatgaacca taaattcaac tttgtaaaaa 60
tcttttgaag catagataat attgtttggt aaatgtttct tttgtttggt aaatgtttct 120

tttaaagacc ctcctattct ataaaactct gcatgtagag gcttgtttac ctttctctct 180
ctaaggttta caataggagt ggtgatttga aaaatataaa attatgagat tggttttcct 240
gtggcataaa ttgcatcact gtatcatttt ctttttaac cggtaagant ttcagtttgt 300
tggaaagtaa ctgtganaac ccagtttccc gtccatctcc cttagggact acccatagaa 360
catgaaaagg tccccacnga agcaagaaga taagtctttc atggctgctg gttgcttaaa 420
ccactttaaa accaaaaaat tccccttgga aa 452

<210> 108
<211> 502
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 22, 31, 126, 168, 183, 205, 219, 231, 236, 259, 283, 295,
296, 298, 301, 340, 354, 378, 383, 409, 433, 446, 455, 466,
488
<223> n = A,T,C or G

<400> 108
atcttcttcc cttaattagt tnttatttat ntattaaatt ttattgcatg tcctggcaaa 60
caaaaagaga ttgtagattg gcttctggct ccccaaaagc ccataacaga aagtaccaca 120
agaccncaac tgaagcttaa aaaatctatc acatgtataa taccttttnga agaacattaa 180
tanagcatat aaaactttta acatntgctt aatgttgtnc aattataaaa ntaatngaaa 240
aaaatgtccc tttaacatnc aatatcccac atagtgttat ttnaggggat taccnngnaa 300
naaaaaaagg gtagaaggga tttaatgaaa actctgcttn ccatttctgt ttanaaacgt 360
ctccagaaca aaaacttntc aantctttca gctaaccgca tttgagctna ggccactcaa 420
aaactccatt agncccactt tctaanggtc tctanagctt actaancctt ttgacccctt 480
accctggnta ctcctgccct ca 502

<210> 109
<211> 1308
<212> DNA
<213> Homo sapiens

<400> 109
acccgaggtc tcgctaaaat catcatggat tcacttggcg ccgtcagcac tcgacttggg 60
tttgatcttt tcaaagagct gaagaaaaca aatgatggca acatcttctt ttcccctgtg 120
ggcatcttga ctgcaattgg catggtcctc ctggggaccc gaggagccac cgcttcccag 180
ttggaggagg tgtttcactc tgaaaaagag acgaagagct caagaataaa ggctgaagaa 240
aaagaggtga ttgagaacac agaagcagta catcaacaat tccaaaagtt tttgactgaa 300
ataagcaaac tcactaatga ttatgaactg aacataacca acaggctgtt tggagaaaaa 360
acatacctct tccttcaaaa atacttagat tatgttgaaa aatattatca tgcatctctg 420
gaacctgttg attttgtaaa tgcagccgat gaaagtcgaa agaagattaa ttcctgggtt 480
gaaagcaaaa caaatgaaaa aatcaaggac ttgttcccag atggctctat tagtagctct 540
accaagctgg tgctggtgaa catggtttat tttaaagggc aatgggacag ggagtttaag 600
aaagaaaata ctaaggaaga gaaattttgg atgaataaga gcacaagtaa atctgtacag 660
atgatgacac agagccattc ctttagcttc actttcctgg aggacttgca ggccaaaatt 720
ctagggattc catataaaaa caacgaccta agcatgtttg tgcttctgcc caacgacatc 780
gatggcctgg agaagataat agataaaata agtcctgaga aattggtaga gtggactagt 840
ccagggcata tggaagaaag aaaggtgaat ctgcacttgc cccggtttga ggtggaggac 900
agttacgatc tagaggcggt cctggctgcc atggggatgg gcgatgcctt cagtgagcac 960
aaagccgact actcgggaat gtcgtcaggc tccgggttgt acgcccagaa gttcctgcac 1020
agttcctttg tggcagtaac tgaggaaggc accgaggctg cagctgccac tggcataggc 1080

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tttactgtca catccgcccc aggtcatgaa aatgttcact gcaatcatcc cttcctgttc 1140
ttcatcaggc acaatgaatc caacagcatc ctcttcttcg gcagattttc ttctccttaa 1200
gatgatcgtt gccatggcat tgctgctttt agcaaaaaac aactaccagt gttactcata 1260
tgattatgaa aatcgtccat tcttttaaat ggtggctcac ttgcattt              1308

<210> 110
<211> 391
<212> PRT
<213> Homo sapiens

<400> 110
Met Asp Ser Leu Gly Ala Val Ser Thr Arg Leu Gly Phe Asp Leu Phe
 1               5                  10                  15
Lys Glu Leu Lys Lys Thr Asn Asp Gly Asn Ile Phe Phe Ser Pro Val
            20                  25                  30
Gly Ile Leu Thr Ala Ile Gly Met Val Leu Leu Gly Thr Arg Gly Ala
        35                  40                  45
Thr Ala Ser Gln Leu Glu Glu Val Phe His Ser Glu Lys Glu Thr Lys
    50                  55                  60
Ser Ser Arg Ile Lys Ala Glu Glu Lys Glu Val Ile Glu Asn Thr Glu
65                  70                  75                  80
Ala Val His Gln Gln Phe Gln Lys Phe Leu Thr Glu Ile Ser Lys Leu
                85                  90                  95
Thr Asn Asp Tyr Glu Leu Asn Ile Thr Asn Arg Leu Phe Gly Glu Lys
            100                 105                 110
Thr Tyr Leu Phe Leu Gln Lys Tyr Leu Asp Tyr Val Glu Lys Tyr Tyr
        115                 120                 125
His Ala Ser Leu Glu Pro Val Asp Phe Val Asn Ala Ala Asp Glu Ser
    130                 135                 140
Arg Lys Lys Ile Asn Ser Trp Val Glu Ser Lys Thr Asn Glu Lys Ile
145                 150                 155                 160
Lys Asp Leu Phe Pro Asp Gly Ser Ile Ser Ser Ser Thr Lys Leu Val
                165                 170                 175
Leu Val Asn Met Val Tyr Phe Lys Gly Gln Trp Asp Arg Glu Phe Lys
            180                 185                 190
Lys Glu Asn Thr Lys Glu Glu Lys Phe Trp Met Asn Lys Ser Thr Ser
        195                 200                 205
Lys Ser Val Gln Met Met Thr Gln Ser His Ser Phe Ser Phe Thr Phe
    210                 215                 220
Leu Glu Asp Leu Gln Ala Lys Ile Leu Gly Ile Pro Tyr Lys Asn Asn
225                 230                 235                 240
Asp Leu Ser Met Phe Val Leu Leu Pro Asn Asp Ile Asp Gly Leu Glu
                245                 250                 255
Lys Ile Ile Asp Lys Ile Ser Pro Glu Lys Leu Val Glu Trp Thr Ser
            260                 265                 270
Pro Gly His Met Glu Glu Arg Lys Val Asn Leu His Leu Pro Arg Phe
        275                 280                 285
Glu Val Glu Asp Ser Tyr Asp Leu Glu Ala Val Leu Ala Ala Met Gly
    290                 295                 300
Met Gly Asp Ala Phe Ser Glu His Lys Ala Asp Tyr Ser Gly Met Ser
305                 310                 315                 320
Ser Gly Ser Gly Leu Tyr Ala Gln Lys Phe Leu His Ser Ser Phe Val
                325                 330                 335
Ala Val Thr Glu Glu Gly Thr Glu Ala Ala Ala Ala Thr Gly Ile Gly
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            340                 345                 350
Phe Thr Val Thr Ser Ala Pro Gly His Glu Asn Val His Cys Asn His
        355                 360                 365
Pro Phe Leu Phe Phe Ile Arg His Asn Glu Ser Asn Ser Ile Leu Phe
    370                 375                 380
Phe Gly Arg Phe Ser Ser Pro
385                 390
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<210> 111
<211> 1419
<212> DNA
<213> Homo sapiens

<400> 111

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<210> 112
<211> 400
<212> PRT
<213> Homo sapiens

<400> 112

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Lys Glu Leu Lys Lys Thr Asn Asp Gly Asn Ile Phe Phe Ser Pro Val
            20                  25                  30
Gly Ile Leu Thr Ala Ile Gly Met Val Leu Leu Gly Thr Arg Gly Ala
        35                  40                  45
Thr Ala Ser Gln Leu Glu Glu Val Phe His Ser Glu Lys Glu Thr Lys
    50                  55                  60
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Ser Ser Arg Ile Lys Ala Glu Glu Lys Glu Val Val Arg Ile Lys Ala
65                  70                  75                  80
Glu Gly Lys Glu Ile Glu Asn Thr Glu Ala Val His Gln Gln Phe Gln
                85                  90                  95
Lys Phe Leu Thr Glu Ile Ser Lys Leu Thr Asn Asp Tyr Glu Leu Asn
            100                 105                 110
Ile Thr Asn Arg Leu Phe Gly Glu Lys Thr Tyr Leu Phe Leu Gln Lys
        115                 120                 125
Tyr Leu Asp Tyr Val Glu Lys Tyr Tyr His Ala Ser Leu Glu Pro Val
    130                 135                 140
Asp Phe Val Asn Ala Ala Asp Glu Ser Arg Lys Lys Ile Asn Ser Trp
145                 150                 155                 160
Val Glu Ser Lys Thr Asn Glu Lys Ile Lys Asp Leu Phe Pro Asp Gly
                165                 170                 175
Ser Ile Ser Ser Ser Thr Lys Leu Val Leu Val Asn Met Val Tyr Phe
            180                 185                 190
Lys Gly Gln Trp Asp Arg Glu Phe Lys Lys Glu Asn Thr Lys Glu Glu
        195                 200                 205
Lys Phe Trp Met Asn Lys Ser Thr Ser Lys Ser Val Gln Met Met Thr
    210                 215                 220
Gln Ser His Ser Phe Ser Phe Thr Phe Leu Glu Asp Leu Gln Ala Lys
225                 230                 235                 240
Ile Leu Gly Ile Pro Tyr Lys Asn Asn Asp Leu Ser Met Phe Val Leu
                245                 250                 255
Leu Pro Asn Asp Ile Asp Gly Leu Glu Lys Ile Ile Asp Lys Ile Ser
            260                 265                 270
Pro Glu Lys Leu Val Glu Trp Thr Ser Pro Gly His Met Glu Glu Arg
        275                 280                 285
Lys Val Asn Leu His Leu Pro Arg Phe Glu Val Glu Asp Ser Tyr Asp
    290                 295                 300
Leu Glu Ala Val Leu Ala Ala Met Gly Met Gly Asp Ala Phe Ser Glu
305                 310                 315                 320
His Lys Ala Asp Tyr Ser Gly Met Ser Ser Gly Ser Gly Leu Tyr Ala
                325                 330                 335
Gln Lys Phe Leu His Ser Ser Phe Val Ala Val Thr Glu Glu Gly Thr
            340                 345                 350
Glu Ala Ala Ala Ala Thr Gly Ile Gly Phe Thr Val Thr Ser Ala Pro
        355                 360                 365
Gly His Glu Asn Val His Cys Asn His Pro Phe Leu Phe Phe Ile Arg
    370                 375                 380
His Asn Glu Ser Asn Ser Ile Leu Phe Phe Gly Arg Phe Ser Ser Pro
385                 390                 395                 400
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<210> 113
<211> 957
<212> DNA
<213> Homo sapiens

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gaaacatgag ttcttaccag cagaagcaga cctttacccc accacctcag cttcaacagc 180
agcaggtgaa acaacccagc cagcctccac ctcaggaaat atttgttccc acaaccaagg 240

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caccccaagc catagtctct ctcttatttg tatcctaaaa atacggtact ataaagcttt 780
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<210> 114
<211> 161
<212> PRT
<213> Homo sapiens

<400> 114
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Gln Gln Gln Gln Val Lys Gln Pro Ser Gln Pro Pro Pro Gln Glu Ile
            20                  25                  30
Phe Val Pro Thr Thr Lys Glu Pro Cys His Ser Lys Val Pro Gln Pro
        35                  40                  45
Gly Asn Thr Lys Ile Pro Glu Pro Gly Cys Thr Lys Val Pro Glu Pro
    50                  55                  60
Gly Cys Thr Lys Val Pro Glu Pro Gly Cys Thr Lys Val Pro Glu Pro
65                  70                  75                  80
Gly Cys Thr Lys Val Pro Glu Pro Gly Cys Thr Lys Val Pro Glu Pro
                85                  90                  95
Gly Tyr Thr Lys Val Pro Glu Pro Gly Ser Ile Lys Val Pro Asp Gln
            100                 105                 110
Gly Phe Ile Lys Phe Pro Glu Pro Gly Ala Ile Lys Val Pro Glu Gln
        115                 120                 125
Gly Tyr Thr Lys Val Pro Val Pro Gly Tyr Thr Lys Val Pro Glu Pro
    130                 135                 140
Cys Pro Ser Thr Val Thr Pro Gly Pro Ala Gln Gln Lys Thr Lys Gln
145                 150                 155                 160
Lys



<210> 115
<211> 506
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
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158, 195, 210, 212, 219, 226, 246, 248, 249, 255, 258, 261,
263, 265, 275, 304, 317, 321, 331, 337, 340, 358, 371, 377,
380, 396, 450, 491
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<210> 116
<211> 3079
<212> DNA
<213> Homo sapiens

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<210> 117
<211> 6921
<212> DNA
<213> Homo sapiens

<400> 117
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<212> DNA
<213> Homo sapiens

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<211> 486
<212> DNA
<213> Homo sapiens

<220>
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<222> 16
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<400> 125
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<212> DNA
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<211> 754
<212> DNA
<213> Homo sapiens

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<211> 374
<212> DNA
<213> Homo sapiens

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<211> 546
<212> DNA
<213> Homo sapiens

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<210> 130
<211> 5156
<212> DNA
<213> Homo sapiens

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catcctcagg gggtacccgc tcttcctcct ctgcatgaga gacgcggagc acaggcacag 240
catggagctg ggagccggca gtgtctgcag cataactagg gaggggtcgt gatccagatg 300
cgatgaactg gccctggcag gcacagtgct gactcatctc ttggcgacct gcccgggcgg 360
ccgctcgaag c 371

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<211> 343
<212> DNA
<213> Homo sapiens

<400> 142
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agagcagttt tgaaacactc ttttgtagaa tttgcaagcg gatgattgga tcgctatgag 180
gtcttcattg gaaacgggat acctttacat aaaaactaga cagtagcatt ctcagaaatt 240
tctttgggat gtgggcattc aacccacaga ggagaacttc atttgataga gcagttttga 300
aacacccttt ttgtagaatc tacaggtgga catttagagt gct 343

<210> 143
<211> 354
<212> DNA
<213> Homo sapiens

<400> 143
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gtggtggagt gtgtcatgaa caatgtcacc tgtactcgga tctatgaaaa agtagaataa 180
aaattccatc atcactttgg acaggagtta attaagagaa tgaccaagct cagttcaatg 240
agcaaatctc catactgttt ctttcttttt tttttcatta ctgtgttcaa ttatctttat 300
cataaacatt ttacatgcag ctatttcaaa gtgtgttgga ttaattagga tcat 354

<210> 144
<211> 353
<212> DNA
<213> Homo sapiens

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aagatgacag actaagtagg attctgccat ttagaataat tctggtatcc tgggcgttgc 180
gttaagttgc ttaactttca ttctgtctta cgatagtctt cagaggtggg aacagatgaa 240
gaaaccatgc cccagagaag gttaagtgac ttcctcttta tggagccagt gttccaacct 300
aggtttgcct gataccagac ctgtggcccc acctcccatg caggtctctg tgg 353

<210> 145
<211> 371
<212> DNA
<213> Homo sapiens

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aatgcaaact gcaagaatca aagccaaggc caagagggat gccaagatga tcagccattc 240
tggaatttgg ggtgtcctta taggaccaga ggttgtgttt gctccacctt cttgactccc 300
atgtgagacc tcggccgcga ccacgctaag ccgaattcca gcacactggc ggcccgttac 360
tagtggatcc g 371

<210> 146
<211> 355
<212> DNA
<213> Homo sapiens

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<210> 147
<211> 355
<212> DNA
<213> Homo sapiens

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tgactttta ggttggctga tccatcaatc ttgcactcaa ctgttacttc tttcccagtg 180
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<210> 148
<211> 369
<212> DNA
<213> Homo sapiens

<400> 148
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agggagtgtg ccgagggctt ctgagaaggt ttctctcaca tctagaaaga agcgcttaag 180

atgtggcagc ccctcttctt caagtggctc ttgtcctgtt gccctgggag ttctcaaatt 240
gctgcagcag cctccatcca gcctgaggat gacatcaata cacagaggaa gaagagtcag 300
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acttcttca 369

<210> 149
<211> 620
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 169, 171, 222, 472, 528, 559, 599
<223> n = A,T,C or G

<400> 149
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gccaatattt ccttatatct atccataaca tttatactac atttgtaana naatatgcac 180
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gttcttgtta tttccaaata gaatggactt ggtctgttaa gggctaagga gaagaggaag 300
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<210> 150
<211> 371
<212> DNA
<213> Homo sapiens

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<210> 151
<211> 4655
<212> DNA
<213> Homo sapiens

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<210> 152
<211> 586
<212> PRT
<213> Homo sapiens

<400> 152
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            20                  25                  30
Gly Ser Ser Ser Thr Ser Pro Tyr Asn Thr Asp His Ala Gln Asn Ser
        35                  40                  45
Val Thr Ala Pro Ser Pro Tyr Ala Gln Pro Ser Ser Thr Phe Asp Ala
    50                  55                  60
Leu Ser Pro Ser Pro Ala Ile Pro Ser Asn Thr Asp Tyr Pro Gly Pro
65                  70                  75                  80
His Ser Phe Asp Val Ser Phe Gln Gln Ser Ser Thr Ala Lys Ser Ala
                85                  90                  95
Thr Trp Thr Tyr Ser Thr Glu Leu Lys Lys Leu Tyr Cys Gln Ile Ala
            100                 105                 110
Lys Thr Cys Pro Ile Gln Ile Lys Val Met Thr Pro Pro Pro Gln Gly
        115                 120                 125
Ala Val Ile Arg Ala Met Pro Val Tyr Lys Lys Ala Glu His Val Thr
    130                 135                 140
Glu Val Val Lys Arg Cys Pro Asn His Glu Leu Ser Arg Glu Phe Asn
145                 150                 155                 160
Glu Gly Gln Ile Ala Pro Ser Ser His Leu Ile Arg Val Glu Gly Asn
                165                 170                 175
Ser His Ala Gln Tyr Val Glu Asp Pro Ile Thr Gly Arg Gln Ser Val
            180                 185                 190
Leu Val Pro Tyr Glu Pro Pro Gln Val Gly Thr Glu Phe Thr Thr Val
        195                 200                 205
Leu Tyr Asn Phe Met Cys Asn Ser Ser Cys Val Gly Gly Met Asn Arg
    210                 215                 220
Arg Pro Ile Leu Ile Ile Val Thr Leu Glu Thr Arg Asp Gly Gln Val
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225                 230                 235                 240
Leu Gly Arg Arg Cys Phe Glu Ala Arg Ile Cys Ala Cys Pro Gly Arg
                245                 250                 255
Asp Arg Lys Ala Asp Glu Asp Ser Ile Arg Lys Gln Gln Val Ser Asp
            260                 265                 270
Ser Thr Lys Asn Gly Asp Gly Thr Lys Arg Pro Phe Arg Gln Asn Thr
        275                 280                 285
His Gly Ile Gln Met Thr Ser Ile Lys Lys Arg Arg Ser Pro Asp Asp
    290                 295                 300
Glu Leu Val Tyr Leu Pro Val Arg Gly Arg Glu Thr Tyr Glu Met Leu
305                 310                 315                 320
Val Lys Ile Lys Glu Ser Leu Glu Leu Met Gln Tyr Leu Leu Gln His
                325                 330                 335
Thr Ile Glu Thr Tyr Arg Gln Gln Gln Gln Gln Gln His Gln His Leu
            340                 345                 350
Leu Gln Lys Gln Thr Ser Ile Gln Ser Pro Ser Ser Tyr Gly Asn Ser
        355                 360                 365
Ser Pro Pro Leu Asn Lys Met Asn Ser Met Asn Lys Leu Pro Ser Val
    370                 375                 380
Ser Gln Leu Ile Asn Pro Gln Gln Arg Asn Ala Leu Thr Pro Thr Thr
385                 390                 395                 400
Ile Pro Asp Gly Met Gly Ala Asn Ile Pro Met Met Gly Thr His Met
                405                 410                 415
Pro Met Ala Gly Asp Met Asn Gly Leu Ser Pro Thr Gln Ala Leu Pro
            420                 425                 430
Pro Pro Leu Ser Met Pro Ser Thr Ser His Cys Thr Pro Pro Pro Pro
        435                 440                 445
Tyr Pro Thr Asp Cys Ser Ile Val Ser Phe Leu Ala Arg Leu Gly Cys
    450                 455                 460
Ser Ser Cys Leu Asp Tyr Phe Thr Thr Gln Gly Leu Thr Thr Ile Tyr
465                 470                 475                 480
Gln Ile Glu His Tyr Ser Met Asp Asp Leu Ala Ser Leu Lys Ile Pro
                485                 490                 495
Glu Gln Phe Arg His Ala Ile Trp Lys Gly Ile Leu Asp His Arg Gln
            500                 505                 510
Leu His Glu Phe Ser Ser Pro Ser His Leu Leu Arg Thr Pro Ser Ser
        515                 520                 525
Ala Ser Thr Val Ser Val Gly Ser Ser Glu Thr Arg Gly Glu Arg Val
    530                 535                 540
Ile Asp Ala Val Arg Phe Thr Leu Arg Gln Thr Ile Ser Phe Pro Pro
545                 550                 555                 560
Arg Asp Glu Trp Asn Asp Phe Asn Phe Asp Met Asp Ala Arg Arg Asn
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Lys Gln Gln Arg Ile Lys Glu Glu Gly Glu
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<211> 2007
<212> DNA
<213> Homo sapiens

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<210> 154
<211> 2148
<212> DNA
<213> Homo sapiens

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tctccagagg aatttttagg caaggccgtg gggctcagtg cagaagcact aacaatacag 660
caatatgctg atgttttgtc caaggctttg gggaaagaag tccgagatgc aaagactatc 720
tgtgctatag atgaccagaa aacagtggaa gaaggtttca tggaagacgt gggcttgagt 780
tggtccttga gggaacatga ccatgtatag acagaggagg catcaagaag gctggcctgg 840

```
ctaattctgg aataaacacg acaaaccaga ggcagtacgg gaaggaggca aattctggct 900
ctgcctctat ccttgattac cccggaagct ttcgagaagc tgggattccc tgcagcaaag 960
gaaatagcca atatgtgtcg tttctatgaa atgaagccag accgagatgt caatctcacc 1020
caccaactaa atcccaaagt caaaagcttc agccatttta tctcagagaa ccagggagcc 1080
ttcaagggca tgtagaaaat cagctgttca gataggcctc tgcaccacac agcctctttc 1140
ctctctgatc cttttcctct ttacggcaca acattcatgt tgacagaaca tgctggaatg 1200
caattgtttg caacaccgaa ggatttcctg cggtcgcctc ttcagtagga agcactgcat 1260
tggtgatagg acacggtaat ttgattcaca tttaacttgc tagttagtga taagggtggt 1320
acaactgttt ggtaaaatga gaagcctcgg aacttggagc ttctctccta ccactaatgg 1380
gagggcagat tatactggga tttctcctgg gtgagtaatt tcaagcccta atgctgaaat 1440
tcccctaggc agctccagtt ttctcaactg cattgcaaaa ttcccagtga acttttaagt 1500
acttttaact taaaaaaatg aacatctttg tagagaattt tctggggaac atggtgttca 1560
atgaacaagc acaagcattg gaaatgctaa aattcagttt tgcctcaaga ttggaagttt 1620
attttctgac tcattcatga agtcatctat tgagccacca ttcaattatt catctattaa 1680
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atttgtggac ttctcttcat tcctatgtgt tttcttatca aagtgatcca ctctcgaaag 1800
gctcctttcc agtctgtggt tgggttcaag tcatgccagg gccaggggcc ccatctcctc 1860
gtttagctct aggcaaaatc caggggatct gcagtgggga gcgggggcag gaagctggag 1920
ggaaggcctg tgaagggtag ggatgtggaa agacaaggtg acagaaggac ccaataggac 1980
ctttctatat ctctggctta gcattttcta catcatattg taatcgtctt atttgctagt 2040
tttcttcctt actgtgagtg actaacagtc atctttatcc cagtgcctgg tacataataa 2100
gtgatcaata aatgttgatt gactaaatga aaaaaaaaaa aaaaaaaa              2148
```

<210> 155
<211> 153
<212> PRT
<213> Homo sapiens

<400> 155

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Met Thr Ser Val Arg Val Ala Ala Tyr Phe Glu Asn Phe Leu Ala Ala
 1               5                  10                  15
Trp Arg Pro Val Lys Ala Ser Asp Gly Asp Tyr Tyr Thr Leu Ala Val
            20                  25                  30
Pro Met Gly Asp Val Pro Met Asp Gly Ile Ser Val Ala Asp Ile Gly
        35                  40                  45
Ala Ala Val Ser Ser Ile Phe Asn Ser Pro Glu Glu Phe Leu Gly Lys
    50                  55                  60
Ala Val Gly Leu Ser Ala Glu Ala Leu Thr Ile Gln Gln Tyr Ala Asp
65                  70                  75                  80
Val Leu Ser Lys Ala Leu Gly Lys Glu Val Arg Asp Ala Lys Ile Thr
                85                  90                  95
Pro Glu Ala Phe Glu Lys Leu Gly Phe Pro Ala Ala Lys Glu Ile Ala
            100                 105                 110
Asn Met Cys Arg Phe Tyr Glu Met Lys Pro Asp Arg Asp Val Asn Leu
        115                 120                 125
Thr His Gln Leu Asn Pro Lys Val Lys Ser Phe Ser Gln Phe Ile Ser
    130                 135                 140
Glu Asn Gln Gly Ala Phe Lys Gly Met
145                 150
```

<210> 156
<211> 128
<212> PRT

<213> Homo sapiens

<400> 156

```
Met Thr Ser Val Arg Val Ala Ala Tyr Phe Glu Asn Phe Leu Ala Ala
 1               5                  10                  15
Trp Arg Pro Val Lys Ala Ser Asp Gly Asp Tyr Tyr Thr Leu Ala Val
            20                  25                  30
Pro Met Gly Asp Val Pro Met Asp Gly Ile Ser Val Ala Asp Ile Gly
        35                  40                  45
Ala Ala Val Ser Ser Ile Phe Asn Ser Pro Glu Glu Phe Leu Gly Lys
    50                  55                  60
Ala Val Gly Leu Ser Ala Glu Ala Leu Thr Ile Gln Gln Tyr Ala Asp
65                  70                  75                  80
Val Leu Ser Lys Ala Leu Gly Lys Glu Val Arg Asp Ala Lys Thr Ile
                85                  90                  95
Cys Ala Ile Asp Asp Gln Lys Thr Val Glu Glu Gly Phe Met Glu Asp
            100                 105                 110
Val Gly Leu Ser Trp Ser Leu Arg Glu His Asp His Val Ala Gly Ala
        115                 120                 125
```

<210> 157
<211> 424
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 320, 322
<223> n = A,T,C or G

<400> 157

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ctgcagcccg ggggatccac tagtccagtg tggtggaatt cattggtctt tacaagactt 60
ggatacatta cagcagacat ggaaatataa ttttaaaaaa tttctctcca acctccttca 120
aattcagtca ccactgttat attaccttct ccaggaaccc tccagtgggg aaggctgcga 180
tattagattt ccttgtatgc aaagtttttg ttgaaagctg tgctcagagg aggtgagagg 240
agaggaagga gaaaactgca tcataacttt acagaattga atctagagtc ttccccgaaa 300
agcccagaaa cttctctgcn gnatctggct tgtccatctg gtctaaggtg gctgcttctt 360
ccccagccat cgagtcagtt tgtgcccatg aataatacac gacctgctat ttcccatgac 420
tgct                                                              424
```

<210> 158
<211> 2099
<212> DNA
<213> Homo sapiens

<400> 158

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ccgcggttaa aaggcgcagc aggtgggagc cggggccttc acccgaaacc cgacgagagc 60
ccgacagccg gcggcgcccg agcccgacct gcctgcccag ccggagcgaa gggcgccgcc 120
ccgcgcagag cccgcgccag ggccgccggc cgcagagcag ttaaaacgtg caggcaccag 180
aaggcacttc ctgtcggtga agaagacctg tctccggtgt cacgggcatc ctgtgttttg 240
caaacggggc tgacctccct tcctggggag caggaagggt cagggaagga aaagaagtac 300
agaagatctg gctaaacaat ttctgtatgg cgaaagaaaa attctaactt gtacgccctc 360
ttcatgcatc tttaattcaa tttgaatatt ccaggcgaca tcctcactga ccgagcaaag 420
```

attgacattc gtatcatcac tgtgcaccat tggcttctag gcactccagt ggggtaggag 480
aaggaggtct gaaaccctcg cagagggatc ttgccctcat tctttgggtc tgaaacactg 540
gcagtcgttg gaaacaggac tcagggataa accagcgcaa tggattgggg gacgctgcac 600
actttcatcg ggggtgtcaa caaacactcc accagcatcg ggaaggtgtg gatcacagtc 660
atctttattt tccgagtcat gatcctcgtg gtggctgccc aggaagtgtg gggtgacgag 720
caagaggact tcgtctgcaa cacactgcaa ccgggatgca aaaatgtgtg ctatgaccac 780
tttttcccgg tgtcccacat ccggctgtgg gccctccagc tgatcttcgt ctccacccca 840
gcgctgctgg tggccatgca tgtggcctac tacaggcacg aaaccactcg caagttcagg 900
cgaggagaga agaggaatga tttcaaagac atagaggaca ttaaaaagca gaaggttcgg 960
atagaggggt cgctgtggtg gacgtacacc agcagcatct ttttccgaat catctttgaa 1020
gcagccttta tgtatgtgtt ttacttcctt tacaatgggt accacctgcc ctgggtgttg 1080
aaatgtggga ttgacccctg ccccaacctt gttgactgct ttatttctag gccaacagag 1140
aagaccgtgt ttaccatttt tatgatttct gcgtctgtga tttgcatgct gcttaacgtg 1200
gcagagttgt gctacctgct gctgaaagtg tgttttagga gatcaaagag agcacagacg 1260
caaaaaaatc accccaatca tgccctaaag gagagtaagc agaatgaaat gaatgagctg 1320
atttcagata gtggtcaaaa tgcaatcaca ggttcccaag ctaaacattt caaggtaaaa 1380
tgtagctgcg tcataaggag acttctgtct tctccagaag gcaataccaa cctgaaagtt 1440
ccttctgtag cctgaagagt ttgtaaatga ctttcataat aaatagacac ttgagttaac 1500
tttttgtagg atacttgctc cattcataca caacgtaatc aaatatgtgg tccatctctg 1560
aaaacaagag actgcttgac aaaggagcat tgcagtcact ttgacaggtt ccttttaagt 1620
ggactctctg acaaagtggg tactttctga aaatttatat aactgttgtt gataaggaac 1680
atttatccag gaattgatac gtttattagg aaaagatatt tttataggct tggatgtttt 1740
tagttctgac tttgaattta tataaagtat ttttataatg actggtcttc cttacctgga 1800
aaaacatgcg atgttagttt tagaattaca ccacaagtat ctaaatttgg aacttacaaa 1860
gggtctatct tgtaaatatt gttttgcatt gtctgttggc aaatttgtga actgtcatga 1920
tacgcttaag gtggaaagtg ttcattgcac aatatatttt tactgctttc tgaatgtaga 1980
cggaacagtg tggaagcaga aggcttttt aactcatccg tttgccaatc attgcaaaca 2040
actgaaatgt ggatgtgatt gcctcaataa agctcgtccc cattgcttaa aaaaaaaaa 2099

<210> 159
<211> 291
<212> PRT
<213> Homo sapiens

<400> 159
Met Asp Trp Gly Thr Leu His Thr Phe Ile Gly Gly Val Asn Lys His
 1   5   10   15
Ser Thr Ser Ile Gly Lys Val Trp Ile Thr Val Ile Phe Ile Phe Arg
            20   25   30
Val Met Ile Leu Val Val Ala Ala Gln Glu Val Trp Gly Asp Glu Gln
        35   40   45
Glu Asp Phe Val Cys Asn Thr Leu Gln Pro Gly Cys Lys Asn Val Cys
    50   55   60
Tyr Asp His Phe Phe Pro Val Ser His Ile Arg Leu Trp Ala Leu Gln
65   70   75   80
Leu Ile Phe Val Ser Thr Pro Ala Leu Leu Val Ala Met His Val Ala
                85   90   95
Tyr Tyr Arg His Glu Thr Thr Arg Lys Phe Arg Arg Gly Glu Lys Arg
            100   105   110
Asn Asp Phe Lys Asp Ile Glu Asp Ile Lys Lys Gln Lys Val Arg Ile
        115   120   125
Glu Gly Ser Leu Trp Trp Thr Tyr Thr Ser Ser Ile Phe Phe Arg Ile
    130   135   140
Ile Phe Glu Ala Ala Phe Met Tyr Val Phe Tyr Phe Leu Tyr Asn Gly

```
145                 150                 155                 160
Tyr His Leu Pro Trp Val Leu Lys Cys Gly Ile Asp Pro Cys Pro Asn
                165                 170                 175
Leu Val Asp Cys Phe Ile Ser Arg Pro Thr Glu Lys Thr Val Phe Thr
            180                 185                 190
Ile Phe Met Ile Ser Ala Ser Val Ile Cys Met Leu Leu Asn Val Ala
        195                 200                 205
Glu Leu Cys Tyr Leu Leu Leu Lys Val Cys Phe Arg Arg Ser Lys Arg
    210                 215                 220
Ala Gln Thr Gln Lys Asn His Pro Asn His Ala Leu Lys Glu Ser Lys
225                 230                 235                 240
Gln Asn Glu Met Asn Glu Leu Ile Ser Asp Ser Gly Gln Asn Ala Ile
                245                 250                 255
Thr Gly Ser Gln Ala Lys His Phe Lys Val Lys Cys Ser Cys Val Ile
            260                 265                 270
Arg Arg Leu Leu Ser Ser Pro Glu Gly Asn Thr Asn Leu Lys Val Pro
        275                 280                 285
Ser Val Ala
    290
```

<210> 160
<211> 3951
<212> DNA
<213> Homo sapiens

<400> 160

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gaggcttctc tacaacatga cccaaaggag cattgcaggt cctatttgca acctgaagtt 120
tgtgactctc ctggttgcct taagttcaga actcccattc ctgggagctg gagtacagct 180
tcaagacaat gggtataatg gattgctcat tgcaattaat cctcaggtac ctgagaatca 240
gaacctcatc tcaaacatta aggaaatgat aactgaagct tcattttacc tatttaatgc 300
taccaagaga agagtatttt tcagaaatat aaagatttta atacctgcca catggaaagc 360
taataataac agcaaaataa aacaagaatc atatgaaaag gcaaatgtca tagtgactga 420
ctggtatggg gcacatggag atgatccata caccctacaa tacagagggt gtggaaaaga 480
gggaaaatac attcatttca cacctaattt cctactgaat gataacttaa cagctggcta 540
cggatcacga ggccgagtgt ttgtccatga atgggcccac ctccgttggg gtgtgttcga 600
tgagtataac aatgacaaac ctttctacat aaatgggcaa aatcaaatta aagtgacaag 660
gtgttcatct gacatcacag gcatttttgt gtgtgaaaaa ggtccttgcc cccaagaaaa 720
ctgtattatt agtaagcttt ttaaagaagg atgcaccttt atctacaata gcacccaaaa 780
tgcaactgca tcaataatgt tcatgcaaag tttatcttct gtggttgaat tttgtaatgc 840
aagtacccac aaccaagaag caccaaacct acagaaccag atgtgcagcc tcagaagtgc 900
atgggatgta atcacagact ctgctgactt tcaccacagc tttcccatga acgggactga 960
gcttccacct cctcccacat tctcgcttgt agaggctggt gacaaagtgg tctgtttagt 1020
gctggatgtg tccagcaaga tggcagaggc tgacagactc cttcaactac aacaagccgc 1080
agaattttat ttgatgcaga ttgttgaaat tcataccttc gtgggcattg ccagtttcga 1140
cagcaaagga gagatcagag cccagctaca ccaaattaac agcaatgatg atcgaaagtt 1200
gctggtttca tatctgccca ccactgtatc agctaaaaca gacatcagca tttgttcagg 1260
gcttaagaaa ggatttgagg tggttgaaaa actgaatgga aaagcttatg gctctgtgat 1320
gatattagtg accagcggag atgataagct tcttggcaat tgcttaccca ctgtgctcag 1380
cagtggttca acaattcact ccattgccct gggttcatct gcagccccaa atctggagga 1440
attatcacgt cttacaggag gtttaaagtt ctttgttcca gatatatcaa actccaatag 1500
catgattgat gctttcagta gaatttcctc tggaactgga gacattttcc agcaacatat 1560
tcagcttgaa agtacaggtg aaaatgtcaa acctcaccat caattgaaaa acacagtgac 1620
```

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tgtggataat actgtgggca acgacactat gtttctagtt acgtggcagg ccagtggtcc 1680
tcctgagatt atattatttg atcctgatgg acgaaaatac tacacaaata attttatcac 1740
caatctaact tttcggacag ctagtctttg gattccagga acagctaagc ctgggcactg 1800
gacttacacc ctgaacaata cccatcattc tctgcaagcc ctgaaagtga cagtgacctc 1860
tcgcgcctcc aactcagctg tgcccccagc cactgtggaa gcctttgtgg aaagagacag 1920
cctccatttt cctcatcctg tgatgattta tgccaatgtg aaacagggat tttatcccat 1980
tcttaatgcc actgtcactg ccacagttga gccagagact ggagatcctg ttacgctgag 2040
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ttttttctcc tttgctgcaa atggtagata tagcttgaaa gtgcatgtca atcactctcc 2160
cagcataagc accccagccc actctattcc agggagtcat gctatgtatg taccaggtta 2220
cacagcaaac ggtaatattc agatgaatgc tccaaggaaa tcagtaggca gaaatgagga 2280
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ccaggctaca agctatgaaa taagaatgag taaaagtcta cagaatatcc aagatgactt 2520
taacaatgct attttagtaa atacatcaaa gcgaaatcct cagcaagctg gcatcaggga 2580
gatatttacg ttctcacccc aaatttccac gaatggacct gaacatcagc caaatggaga 2640
aacacatgaa agccacagaa tttatgttgc aatacgagca atggatagga actccttaca 2700
gtctgctgta tctaacattg cccaggcgcc tctgtttatt ccccccaatt ctgatcctgt 2760
acctgccaga gattatctta tattgaaagg agttttaaca gcaatgggtt tgataggaat 2820
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aattattctt taaagtaatg tctttaaagg caaagggaag ggtaaagtcg gaccagtgtc 3180
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tatgaagccc ctaatgcaaa gctctttacc tcttgctatt ttgttatata tattacagat 3420
gaaatctcac tgctaatgct cagagatctt ttttcactgt aagaggtaac ctttaacaat 3480
atgggtatta cctttgtctc ttcataccgg ttttatgaca aaggtctatt gaatttattt 3540
gtttgtaagt ttctactccc atcaaagcag ctttttaagt tattgccttg gttattatgg 3600
atgatagtta tagcccttat aatgccttaa ctaaggaaga aaagatgtta ttctgagttt 3660
gttttaatac atatatgaac atatagtttt attcaattaa accaaagaag aggtcagcag 3720
ggagatacta acctttggaa atgattagct ggctctgttt tttggttaaa taagagtctt 3780
taatcctttc tccatcaaga gttacttacc aagggcaggg gaaggggggat atagaggtcc 3840
caaggaaata aaaatcatct ttcatcttta attttactcc ttcctcttat ttttttaaaa 3900
gattatcgaa caataaaatc atttgccttt ttaattaaaa acataaaaaa a          3951
```

<210> 161
<211> 943
<212> PRT
<213> Homo sapiens

<400> 161

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Met Thr Gln Arg Ser Ile Ala Gly Pro Ile Cys Asn Leu Lys Phe Val
 1               5                  10                  15
Thr Leu Leu Val Ala Leu Ser Ser Glu Leu Pro Phe Leu Gly Ala Gly
            20                  25                  30
Val Gln Leu Gln Asp Asn Gly Tyr Asn Gly Leu Leu Ile Ala Ile Asn
        35                  40                  45
Pro Gln Val Pro Glu Asn Gln Asn Leu Ile Ser Asn Ile Lys Glu Met
    50                  55                  60
```

```
Ile Thr Glu Ala Ser Phe Tyr Leu Phe Asn Ala Thr Lys Arg Arg Val
65                  70                  75                  80
Phe Phe Arg Asn Ile Lys Ile Leu Ile Pro Ala Thr Trp Lys Ala Asn
                85                  90                  95
Asn Asn Ser Lys Ile Lys Gln Glu Ser Tyr Glu Lys Ala Asn Val Ile
            100                 105                 110
Val Thr Asp Trp Tyr Gly Ala His Gly Asp Asp Pro Tyr Thr Leu Gln
        115                 120                 125
Tyr Arg Gly Cys Gly Lys Glu Gly Lys Tyr Ile His Phe Thr Pro Asn
    130                 135                 140
Phe Leu Leu Asn Asp Asn Leu Thr Ala Gly Tyr Gly Ser Arg Gly Arg
145                 150                 155                 160
Val Phe Val His Glu Trp Ala His Leu Arg Trp Gly Val Phe Asp Glu
                165                 170                 175
Tyr Asn Asn Asp Lys Pro Phe Tyr Ile Asn Gly Gln Asn Gln Ile Lys
            180                 185                 190
Val Thr Arg Cys Ser Ser Asp Ile Thr Gly Ile Phe Val Cys Glu Lys
        195                 200                 205
Gly Pro Cys Pro Gln Glu Asn Cys Ile Ile Ser Lys Leu Phe Lys Glu
    210                 215                 220
Gly Cys Thr Phe Ile Tyr Asn Ser Thr Gln Asn Ala Thr Ala Ser Ile
225                 230                 235                 240
Met Phe Met Gln Ser Leu Ser Ser Val Val Glu Phe Cys Asn Ala Ser
                245                 250                 255
Thr His Asn Gln Glu Ala Pro Asn Leu Gln Asn Gln Met Cys Ser Leu
            260                 265                 270
Arg Ser Ala Trp Asp Val Ile Thr Asp Ser Ala Asp Phe His His Ser
        275                 280                 285
Phe Pro Met Asn Gly Thr Glu Leu Pro Pro Pro Pro Thr Phe Ser Leu
    290                 295                 300
Val Glu Ala Gly Asp Lys Val Val Cys Leu Val Leu Asp Val Ser Ser
305                 310                 315                 320
Lys Met Ala Glu Ala Asp Arg Leu Leu Gln Leu Gln Gln Ala Ala Glu
                325                 330                 335
Phe Tyr Leu Met Gln Ile Val Glu Ile His Thr Phe Val Gly Ile Ala
            340                 345                 350
Ser Phe Asp Ser Lys Gly Glu Ile Arg Ala Gln Leu His Gln Ile Asn
        355                 360                 365
Ser Asn Asp Asp Arg Lys Leu Leu Val Ser Tyr Leu Pro Thr Thr Val
    370                 375                 380
Ser Ala Lys Thr Asp Ile Ser Ile Cys Ser Gly Leu Lys Lys Gly Phe
385                 390                 395                 400
Glu Val Val Glu Lys Leu Asn Gly Lys Ala Tyr Gly Ser Val Met Ile
                405                 410                 415
Leu Val Thr Ser Gly Asp Asp Lys Leu Leu Gly Asn Cys Leu Pro Thr
            420                 425                 430
Val Leu Ser Ser Gly Ser Thr Ile His Ser Ile Ala Leu Gly Ser Ser
        435                 440                 445
Ala Ala Pro Asn Leu Glu Glu Leu Ser Arg Leu Thr Gly Gly Leu Lys
    450                 455                 460
Phe Phe Val Pro Asp Ile Ser Asn Ser Asn Ser Met Ile Asp Ala Phe
465                 470                 475                 480
Ser Arg Ile Ser Ser Gly Thr Gly Asp Ile Phe Gln Gln His Ile Gln
                485                 490                 495
```

```
Leu Glu Ser Thr Gly Glu Asn Val Lys Pro His His Gln Leu Lys Asn
            500                 505                 510
Thr Val Thr Val Asp Asn Thr Val Gly Asn Asp Thr Met Phe Leu Val
        515                 520                 525
Thr Trp Gln Ala Ser Gly Pro Pro Glu Ile Ile Leu Phe Asp Pro Asp
    530                 535                 540
Gly Arg Lys Tyr Tyr Thr Asn Asn Phe Ile Thr Asn Leu Thr Phe Arg
545                 550                 555                 560
Thr Ala Ser Leu Trp Ile Pro Gly Thr Ala Lys Pro Gly His Trp Thr
                565                 570                 575
Tyr Thr Leu Asn Asn Thr His His Ser Leu Gln Ala Leu Lys Val Thr
            580                 585                 590
Val Thr Ser Arg Ala Ser Asn Ser Ala Val Pro Pro Ala Thr Val Glu
        595                 600                 605
Ala Phe Val Glu Arg Asp Ser Leu His Phe Pro His Pro Val Met Ile
    610                 615                 620
Tyr Ala Asn Val Lys Gln Gly Phe Tyr Pro Ile Leu Asn Ala Thr Val
625                 630                 635                 640
Thr Ala Thr Val Glu Pro Glu Thr Gly Asp Pro Val Thr Leu Arg Leu
                645                 650                 655
Leu Asp Asp Gly Ala Gly Ala Asp Val Ile Lys Asn Asp Gly Ile Tyr
            660                 665                 670
Ser Arg Tyr Phe Phe Ser Phe Ala Ala Asn Gly Arg Tyr Ser Leu Lys
        675                 680                 685
Val His Val Asn His Ser Pro Ser Ile Ser Thr Pro Ala His Ser Ile
    690                 695                 700
Pro Gly Ser His Ala Met Tyr Val Pro Gly Tyr Thr Ala Asn Gly Asn
705                 710                 715                 720
Ile Gln Met Asn Ala Pro Arg Lys Ser Val Gly Arg Asn Glu Glu Glu
                725                 730                 735
Arg Lys Trp Gly Phe Ser Arg Val Ser Ser Gly Gly Ser Phe Ser Val
            740                 745                 750
Leu Gly Val Pro Ala Gly Pro His Pro Asp Val Phe Pro Pro Cys Lys
        755                 760                 765
Ile Ile Asp Leu Glu Ala Val Lys Val Glu Glu Glu Leu Thr Leu Ser
    770                 775                 780
Trp Thr Ala Pro Gly Glu Asp Phe Asp Gln Gly Gln Ala Thr Ser Tyr
785                 790                 795                 800
Glu Ile Arg Met Ser Lys Ser Leu Gln Asn Ile Gln Asp Asp Phe Asn
                805                 810                 815
Asn Ala Ile Leu Val Asn Thr Ser Lys Arg Asn Pro Gln Gln Ala Gly
            820                 825                 830
Ile Arg Glu Ile Phe Thr Phe Ser Pro Gln Ile Ser Thr Asn Gly Pro
        835                 840                 845
Glu His Gln Pro Asn Gly Glu Thr His Glu Ser His Arg Ile Tyr Val
    850                 855                 860
Ala Ile Arg Ala Met Asp Arg Asn Ser Leu Gln Ser Ala Val Ser Asn
865                 870                 875                 880
Ile Ala Gln Ala Pro Leu Phe Ile Pro Pro Asn Ser Asp Pro Val Pro
                885                 890                 895
Ala Arg Asp Tyr Leu Ile Leu Lys Gly Val Leu Thr Ala Met Gly Leu
            900                 905                 910
Ile Gly Ile Ile Cys Leu Ile Ile Val Val Thr His His Thr Leu Ser
        915                 920                 925
```

Arg Lys Lys Arg Ala Asp Lys Lys Glu Asn Gly Thr Lys Leu Leu
930 935 940

<210> 162
<211> 498
<212> DNA
<213> Homo sapiens

<400> 162
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agcccctcaa gtcgggtatg aaggagctgg ccgtgttccg ggagaaggtc actgagcagc 120
accggcagat gggcaagggt ggcaagcatc accttggcct ggaggagccc aagaagctgc 180
gaccaccccc tgccaggact ccctgccaac aggaactgga ccaggtcctg gagcggatct 240
ccaccatgcg ccttccggat gagcggggcc ctctggagca cctctactcc ctgcacatcc 300
ccaactgtga caagcatggc ctgtacaacc tcaaacagtg gcaagatgtc tctgaacggg 360
cagcgtgggg agtgctggtg tgtgaacccc aacaccggga agctgatcca gggagccccc 420
accatccggg gggaccccga gtgtcatctc ttctacaatg agcagcagga ggctcgcggg 480
gtgcacaccc cagcggat 498

<210> 163
<211> 1128
<212> DNA
<213> Homo sapiens

<400> 163
gccacctggc cctcctgatc gacgacacac gcacttgaaa cttgttctca gggtgtgtgg 60
aatcaacttt ccggaagcaa ccagcccacc agaggaggtc ccgagcgcga gcggagacga 120
tgcagcggag actggttcag cagtggagcg tcgcggtgtt cctgctgagc tacgcggtgc 180
cctcctgcgg gcgctcggtg gagggtctca gccgccgcct caaaagagct gtgtctgaac 240
atcagctcct ccatgacaag gggaagtcca tccaagattt acggcgacga ttcttccttc 300
accatctgat cgcagaaatc cacacagctg aaatcagagc tacctcggag gtgtccccta 360
actccaagcc ctctcccaac acaaagaacc accccgtccg atttgggtct gatgatgagg 420
gcagatacct aactcaggaa actaacaagg tggagacgta caaagagcag ccgctcaaga 480
cacctgggaa gaaaaagaaa ggcaagcccg ggaaacgcaa ggagcaggaa aagaaaaaac 540
ggcgaactcg ctctgcctgg ttagactctg gagtgactgg gagtgggcta gaaggggacc 600
acctgtctga cacctccaca acgtcgctgg agctcgattc acggaggcat tgaaattttc 660
agcagagacc ttccaaggac atattgcagg attctgtaat agtgaacata tggaaagtat 720
tagaaatatt tattgtctgt aaatactgta aatgcattgg aataaaactg tctcccccat 780
tgctctatga aactgcacat tggtcattgt gaatattttt ttttttgcca aggctaatcc 840
aattattatt atcacattta ccataattta ttttgtccat tgatgtattt attttgtaaa 900
tgtatcttgg tgctgctgaa tttctatatt ttttgtaaca taatgcactt tagatataca 960
tatcaagtat gttgataaat gacacaatga agtgtctcta ttttgtggtt gattttaatg 1020
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ttaaatttgt aaagaatgtc taataaaata taatctaatt acatcatg 1128

<210> 164
<211> 1310
<212> DNA
<213> Homo sapiens

<400> 164
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ttagccctgt tccacgaacc caggagaact gctggccaga ttaattagac attgctatgg 120

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gagacgtgta aacacactac ttatcattga tgcatatata aaaccatttt attttcgcta 180
ttatttcaga ggaagcgcct ctgatttgtt tctttttttcc ctttttgctc tttctggctg 240
tgtggtttgg agaaagcaca gttggagtag ccggttgcta aataagtccc gagcgcgagc 300
ggagacgatg cagcggagac tggttcagca gtggagcgtc gcggtgttcc tgctgagcta 360
cgcggtgccc tcctgcgggc gctcggtgga gggtctcagc cgccgcctca aaagagctgt 420
gtctgaacat cagctcctcc atgacaaggg gaagtccatc caagatttac ggcgacgatt 480
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tgatgagggc agatacctaa ctcaggaaac taacaaggtg gagacgtaca aagagcagcc 660
gctcaagaca cctgggaaga aaaagaaagg caagcccggg aaacgcaagg agcaggaaaa 720
gaaaaaacgg cgaactcgct ctgcctggtt agactctgga gtgactggga gtgggctaga 780
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tcccccattg ctctatgaaa ctgcacattg gtcattgtga atatttttt ttttgccaag 1020
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gatatacata tcaagtatgt tgataaatga cacaatgaag tgtctctatt ttgtggttga 1200
ttttaatgaa tgcctaaata taattatcca aattgatttt cctttgtgcc cgtaaaaata 1260
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<210> 165
<211> 177
<212> PRT
<213> Homo sapiens

<400> 165

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Met Gln Arg Arg Leu Val Gln Gln Trp Ser Val Ala Val Phe Leu Leu
 1               5                  10                  15
Ser Tyr Ala Val Pro Ser Cys Gly Arg Ser Val Glu Gly Leu Ser Arg
            20                  25                  30
Arg Leu Lys Arg Ala Val Ser Glu His Gln Leu Leu His Asp Lys Gly
        35                  40                  45
Lys Ser Ile Gln Asp Leu Arg Arg Arg Phe Phe Leu His His Leu Ile
    50                  55                  60
Ala Glu Ile His Thr Ala Glu Ile Arg Ala Thr Ser Glu Val Ser Pro
65                  70                  75                  80
Asn Ser Lys Pro Ser Pro Asn Thr Lys Asn His Pro Val Arg Phe Gly
                85                  90                  95
Ser Asp Asp Glu Gly Arg Tyr Leu Thr Gln Glu Thr Asn Lys Val Glu
            100                 105                 110
Thr Tyr Lys Glu Gln Pro Leu Lys Thr Pro Gly Lys Lys Lys Lys Gly
        115                 120                 125
Lys Pro Gly Lys Arg Lys Glu Gln Glu Lys Lys Lys Arg Arg Thr Arg
    130                 135                 140
Ser Ala Trp Leu Asp Ser Gly Val Thr Gly Ser Gly Leu Glu Gly Asp
145                 150                 155                 160
His Leu Ser Asp Thr Ser Thr Thr Ser Leu Glu Leu Asp Ser Arg Arg
                165                 170                 175
His
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<210> 166

<211> 177
<212> PRT
<213> Homo sapiens

<400> 166
Met Gln Arg Arg Leu Val Gln Gln Trp Ser Val Ala Val Phe Leu Leu
 1   5   10   15
Ser Tyr Ala Val Pro Ser Cys Gly Arg Ser Val Glu Gly Leu Ser Arg
            20   25   30
Arg Leu Lys Arg Ala Val Ser Glu His Gln Leu Leu His Asp Lys Gly
        35   40   45
Lys Ser Ile Gln Asp Leu Arg Arg Arg Phe Phe Leu His His Leu Ile
    50   55   60
Ala Glu Ile His Thr Ala Glu Ile Arg Ala Thr Ser Glu Val Ser Pro
65   70   75   80
Asn Ser Lys Pro Ser Pro Asn Thr Lys Asn His Pro Val Arg Phe Gly
                85   90   95
Ser Asp Asp Glu Gly Arg Tyr Leu Thr Gln Glu Thr Asn Lys Val Glu
            100   105   110
Thr Tyr Lys Glu Gln Pro Leu Lys Thr Pro Gly Lys Lys Lys Lys Gly
        115   120   125
Lys Pro Gly Lys Arg Lys Glu Gln Glu Lys Lys Lys Arg Arg Thr Arg
    130   135   140
Ser Ala Trp Leu Asp Ser Gly Val Thr Gly Ser Gly Leu Glu Gly Asp
145   150   155   160
His Leu Ser Asp Thr Ser Thr Thr Ser Leu Glu Leu Asp Ser Arg Arg
                165   170   175
His

<210> 167
<211> 3362
<212> DNA
<213> Homo sapiens

<400> 167
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ttcagaactc ccattcctgg gagctggagt acagcttcaa gacaatgggt ataatggatt 180
gctcattgca attaatcctc aggtacctga gaatcagaac ctcatctcaa acattaagga 240
aatgataact gaagcttcat tttacctatt taatgctacc aagagaagag tatttttcag 300
aaatataaag attttaatac ctgccacatg gaaagctaat aataacagca aaataaaaca 360
agaatcatat gaaaaggcaa atgtcatagt gactgactgg tatggggcac atggagatga 420
tccatacacc ctacaataca gagggtgtgg aaaagaggga aaatacattc atttcacacc 480
taatttccta ctgaatgata acttaacagc tggctacgga tcacgaggcc gagtgtttgt 540
ccatgaatgg gcccacctcc gttggggtgt gttcgatgag tataacaatg acaaaccttt 600
ctacataaat gggcaaaatc aaattaaagt gacaaggtgt tcatctgaca tcacaggcat 660
ttttgtgtgt gaaaaaggtc cttgccccca agaaaactgt attattagta agctttttaa 720
agaaggatgc acctttatct acaatagcac ccaaaatgca actgcatcaa taatgttcat 780
gcaaagttta tcttctgtgg ttgaattttg taatgcaagt acccacaacc aagaagcacc 840
aaacctacag aaccagatgt gcagcctcag aagtgcatgg gatgtaatca cagactctgc 900
tgactttcac cacagctttc ccatgaacgg gactgagctt ccacctcctc ccacattctc 960
gcttgtagag gctggtgaca aagtggtctg tttagtgctg gatgtgtcca gcaagatggc 1020

agaggctgac agactccttc aactacaaca agccgcagaa ttttatttga tgcagattgt 1080
tgaaattcat accttcgtgg gcattgccag tttcgacagc aaaggagaga tcagagccca 1140
gctacaccaa attaacagca atgatgatcg aaagttgctg gtttcatatc tgcccaccac 1200
tgtatcagct aaaacagaca tcagcatttg ttcagggctt aagaaaggat ttgaggtggt 1260
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ttcctctgga actggagaca ttttccagca acatattcag cttgaaagta caggtgaaaa 1560
tgtcaaacct caccatcaat tgaaaaacac agtgactgtg gataatactg tgggcaacga 1620
cactatgttt ctagttacgt ggcaggccag tggtcctcct gagattatat tatttgatcc 1680
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cgaaatcctc agcaagctgg catcagggag atatttacgt tctcacccca aatttccacg 2040
aatggacctg aacatcagcc aaatggagaa acacatgaaa gccacagaat ttatgttgca 2100
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actaacaaag tcaaattaac atcaaaactg tattaaaatg cattgagttt ttgtacaata 2460
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tt 3362

<210> 168
<211> 2784
<212> DNA
<213> Homo sapiens

<400> 168
tctgcatcca tattgaaaac ctgacacaat gtatgcagca ggctcagtgt gagtgaactg 60
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tgtgactctc ctggttgcct taagttcaga actcccattc ctgggagctg gagtacagct 180
tcaagacaat gggtataatg gattgctcat tgcaattaat cctcaggtac ctgagaatca 240
gaacctcatc tcaaacatta aggaaatgat aactgaagct tcattttacc tatttaatgc 300
taccaagaga agagtatttt tcagaaatat aaagatttta atacctgcca catggaaagc 360
taataataac agcaaaataa aacaagaatc atatgaaaag gcaaatgtca tagtgactga 420

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ctggtatggg gcacatggag atgatccata caccctacaa tacagagggt gtggaaaaga 480
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cggatcacga ggccgagtgt ttgtccatga atgggcccac ctccgttggg gtgtgttcga 600
tgagtataac aatgacaaac ctttctacat aaatgggcaa aatcaaatta aagtgacaag 660
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ctgtattatt agtaagcttt ttaaagaagg atgcaccttt atctacaata gcacccaaaa 780
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atgggatgta atcacagact ctgctgactt tcaccacagc tttcccatga acgggactga 960
gcttccacct cctcccacat tctcgcttgt agaggctggt gacaaagtgg tctgtttagt 1020
gctggatgtg tccagcaaga tggcagaggc tgacagactc cttcaactac aacaagccgc 1080
agaattttat ttgatgcaga ttgttgaaat tcataccttc gtgggcattg ccagtttcga 1140
cagcaaagga gagatcagag cccagctaca ccaaattaac agcaatgatg atcgaaagtt 1200
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tatttacgtt ctcaccccaa atttccacga atggacctga acatcagcca aatggagaaa 2640
cacatgaaag ccacagaatt tatgttgcaa tacgagcaat ggataggaac tccttacagt 2700
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ctgccagaga ttatcttata ttga                                        2784

<210> 169
<211> 592
<212> PRT
<213> Homo sapiens

<400> 169
Met Thr Gln Arg Ser Ile Ala Gly Pro Ile Cys Asn Leu Lys Phe Val
 1               5                  10                  15
Thr Leu Leu Val Ala Leu Ser Ser Glu Leu Pro Phe Leu Gly Ala Gly
            20                  25                  30
Val Gln Leu Gln Asp Asn Gly Tyr Asn Gly Leu Leu Ile Ala Ile Asn
        35                  40                  45
Pro Gln Val Pro Glu Asn Gln Asn Leu Ile Ser Asn Ile Lys Glu Met
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    50                  55                  60
Ile Thr Glu Ala Ser Phe Tyr Leu Phe Asn Ala Thr Lys Arg Arg Val
65                  70                  75                  80
Phe Phe Arg Asn Ile Lys Ile Leu Ile Pro Ala Thr Trp Lys Ala Asn
                85                  90                  95
Asn Asn Ser Lys Ile Lys Gln Glu Ser Tyr Glu Lys Ala Asn Val Ile
            100                 105                 110
Val Thr Asp Trp Tyr Gly Ala His Gly Asp Asp Pro Tyr Thr Leu Gln
        115                 120                 125
Tyr Arg Gly Cys Gly Lys Glu Gly Lys Tyr Ile His Phe Thr Pro Asn
    130                 135                 140
Phe Leu Leu Asn Asp Asn Leu Thr Ala Gly Tyr Gly Ser Arg Gly Arg
145                 150                 155                 160
Val Phe Val His Glu Trp Ala His Leu Arg Trp Gly Val Phe Asp Glu
                165                 170                 175
Tyr Asn Asn Asp Lys Pro Phe Tyr Ile Asn Gly Gln Asn Gln Ile Lys
            180                 185                 190
Val Thr Arg Cys Ser Ser Asp Ile Thr Gly Ile Phe Val Cys Glu Lys
        195                 200                 205
Gly Pro Cys Pro Gln Glu Asn Cys Ile Ile Ser Lys Leu Phe Lys Glu
    210                 215                 220
Gly Cys Thr Phe Ile Tyr Asn Ser Thr Gln Asn Ala Thr Ala Ser Ile
225                 230                 235                 240
Met Phe Met Gln Ser Leu Ser Ser Val Val Glu Phe Cys Asn Ala Ser
                245                 250                 255
Thr His Asn Gln Glu Ala Pro Asn Leu Gln Asn Gln Met Cys Ser Leu
            260                 265                 270
Arg Ser Ala Trp Asp Val Ile Thr Asp Ser Ala Asp Phe His His Ser
        275                 280                 285
Phe Pro Met Asn Gly Thr Glu Leu Pro Pro Pro Pro Thr Phe Ser Leu
    290                 295                 300
Val Glu Ala Gly Asp Lys Val Val Cys Leu Val Leu Asp Val Ser Ser
305                 310                 315                 320
Lys Met Ala Glu Ala Asp Arg Leu Leu Gln Leu Gln Gln Ala Ala Glu
                325                 330                 335
Phe Tyr Leu Met Gln Ile Val Glu Ile His Thr Phe Val Gly Ile Ala
            340                 345                 350
Ser Phe Asp Ser Lys Gly Glu Ile Arg Ala Gln Leu His Gln Ile Asn
        355                 360                 365
Ser Asn Asp Asp Arg Lys Leu Leu Val Ser Tyr Leu Pro Thr Thr Val
    370                 375                 380
Ser Ala Lys Thr Asp Ile Ser Ile Cys Ser Gly Leu Lys Lys Gly Phe
385                 390                 395                 400
Glu Val Val Glu Lys Leu Asn Gly Lys Ala Tyr Gly Ser Val Met Ile
                405                 410                 415
Leu Val Thr Ser Gly Asp Asp Lys Leu Leu Gly Asn Cys Leu Pro Thr
            420                 425                 430
Val Leu Ser Ser Gly Ser Thr Ile His Ser Ile Ala Leu Gly Ser Ser
        435                 440                 445
Ala Ala Pro Asn Leu Glu Glu Leu Ser Arg Leu Thr Gly Gly Leu Lys
    450                 455                 460
Phe Phe Val Pro Asp Ile Ser Asn Ser Asn Ser Met Ile Asp Ala Phe
465                 470                 475                 480
Ser Arg Ile Ser Ser Gly Thr Gly Asp Ile Phe Gln Gln His Ile Gln
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                485                 490                 495
Leu Glu Ser Thr Gly Glu Asn Val Lys Pro His His Gln Leu Lys Asn
            500                 505                 510
Thr Val Thr Val Asp Asn Thr Val Gly Asn Asp Thr Met Phe Leu Val
        515                 520                 525
Thr Trp Gln Ala Ser Gly Pro Pro Glu Ile Ile Leu Phe Asp Pro Asp
    530                 535                 540
Gly Arg Lys Tyr Tyr Thr Asn Asn Phe Ile Thr Asn Leu Thr Phe Arg
545                 550                 555                 560
Thr Ala Ser Leu Trp Ile Pro Gly Thr Ala Lys Pro Gly His Trp Thr
                565                 570                 575
Tyr Thr Leu Met Cys Phe His His Ala Lys Leu Leu Thr Trp Lys Leu
            580                 585                 590


<210> 170
<211> 791
<212> PRT
<213> Homo sapiens

<400> 170
Met Thr Gln Arg Ser Ile Ala Gly Pro Ile Cys Asn Leu Lys Phe Val
 1               5                  10                  15
Thr Leu Leu Val Ala Leu Ser Ser Glu Leu Pro Phe Leu Gly Ala Gly
            20                  25                  30
Val Gln Leu Gln Asp Asn Gly Tyr Asn Gly Leu Leu Ile Ala Ile Asn
        35                  40                  45
Pro Gln Val Pro Glu Asn Gln Asn Leu Ile Ser Asn Ile Lys Glu Met
    50                  55                  60
Ile Thr Glu Ala Ser Phe Tyr Leu Phe Asn Ala Thr Lys Arg Arg Val
65                  70                  75                  80
Phe Phe Arg Asn Ile Lys Ile Leu Ile Pro Ala Thr Trp Lys Ala Asn
                85                  90                  95
Asn Asn Ser Lys Ile Lys Gln Glu Ser Tyr Glu Lys Ala Asn Val Ile
            100                 105                 110
Val Thr Asp Trp Tyr Gly Ala His Gly Asp Asp Pro Tyr Thr Leu Gln
        115                 120                 125
Tyr Arg Gly Cys Gly Lys Glu Gly Lys Tyr Ile His Phe Thr Pro Asn
    130                 135                 140
Phe Leu Leu Asn Asp Asn Leu Thr Ala Gly Tyr Gly Ser Arg Gly Arg
145                 150                 155                 160
Val Phe Val His Glu Trp Ala His Leu Arg Trp Gly Val Phe Asp Glu
                165                 170                 175
Tyr Asn Asn Asp Lys Pro Phe Tyr Ile Asn Gly Gln Asn Gln Ile Lys
            180                 185                 190
Val Thr Arg Cys Ser Ser Asp Ile Thr Gly Ile Phe Val Cys Glu Lys
        195                 200                 205
Gly Pro Cys Pro Gln Glu Asn Cys Ile Ile Ser Lys Leu Phe Lys Glu
    210                 215                 220
Gly Cys Thr Phe Ile Tyr Asn Ser Thr Gln Asn Ala Thr Ala Ser Ile
225                 230                 235                 240
Met Phe Met Gln Ser Leu Ser Ser Val Val Glu Phe Cys Asn Ala Ser
                245                 250                 255
Thr His Asn Gln Glu Ala Pro Asn Leu Gln Asn Gln Met Cys Ser Leu
```

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            260                 265                 270
Arg Ser Ala Trp Asp Val Ile Thr Asp Ser Ala Asp Phe His His Ser
        275                 280                 285
Phe Pro Met Asn Gly Thr Glu Leu Pro Pro Pro Pro Thr Phe Ser Leu
    290                 295                 300
Val Glu Ala Gly Asp Lys Val Val Cys Leu Val Leu Asp Val Ser Ser
305                 310                 315                 320
Lys Met Ala Glu Ala Asp Arg Leu Leu Gln Leu Gln Gln Ala Ala Glu
                325                 330                 335
Phe Tyr Leu Met Gln Ile Val Glu Ile His Thr Phe Val Gly Ile Ala
            340                 345                 350
Ser Phe Asp Ser Lys Gly Glu Ile Arg Ala Gln Leu His Gln Ile Asn
        355                 360                 365
Ser Asn Asp Asp Arg Lys Leu Leu Val Ser Tyr Leu Pro Thr Thr Val
    370                 375                 380
Ser Ala Lys Thr Asp Ile Ser Ile Cys Ser Gly Leu Lys Lys Gly Phe
385                 390                 395                 400
Glu Val Val Glu Lys Leu Asn Gly Lys Ala Tyr Gly Ser Val Met Ile
                405                 410                 415
Leu Val Thr Ser Gly Asp Asp Lys Leu Leu Gly Asn Cys Leu Pro Thr
            420                 425                 430
Val Leu Ser Ser Gly Ser Thr Ile His Ser Ile Ala Leu Gly Ser Ser
        435                 440                 445
Ala Ala Pro Asn Leu Glu Glu Leu Ser Arg Leu Thr Gly Gly Leu Lys
    450                 455                 460
Phe Phe Val Pro Asp Ile Ser Asn Ser Asn Ser Met Ile Asp Ala Phe
465                 470                 475                 480
Ser Arg Ile Ser Ser Gly Thr Gly Asp Ile Phe Gln Gln His Ile Gln
                485                 490                 495
Leu Glu Ser Thr Gly Glu Asn Val Lys Pro His His Gln Leu Lys Asn
            500                 505                 510
Thr Val Thr Val Asp Asn Thr Val Gly Asn Asp Thr Met Phe Leu Val
        515                 520                 525
Thr Trp Gln Ala Ser Gly Pro Pro Glu Ile Ile Leu Phe Asp Pro Asp
    530                 535                 540
Gly Arg Lys Tyr Tyr Thr Asn Asn Phe Ile Thr Asn Leu Thr Phe Arg
545                 550                 555                 560
Thr Ala Ser Leu Trp Ile Pro Gly Thr Ala Lys Pro Gly His Trp Thr
                565                 570                 575
Tyr Thr Leu Asn Asn Thr His His Ser Leu Gln Ala Leu Lys Val Thr
            580                 585                 590
Val Thr Ser Arg Ala Ser Asn Ser Ala Val Pro Pro Ala Thr Val Glu
        595                 600                 605
Ala Phe Val Glu Arg Asp Ser Leu His Phe Pro His Pro Val Met Ile
    610                 615                 620
Tyr Ala Asn Val Lys Gln Gly Phe Tyr Pro Ile Leu Asn Ala Thr Val
625                 630                 635                 640
Thr Ala Thr Val Glu Pro Glu Thr Gly Asp Pro Val Thr Leu Arg Leu
                645                 650                 655
Leu Asp Asp Gly Ala Gly Ala Asp Val Ile Lys Asn Asp Gly Ile Tyr
            660                 665                 670
Ser Arg Tyr Phe Phe Ser Phe Ala Ala Asn Gly Arg Tyr Ser Leu Lys
        675                 680                 685
Val His Val Asn His Ser Pro Ser Ile Ser Thr Pro Ala His Ser Ile
```

```
    690                 695                 700
Pro Gly Ser His Ala Met Tyr Val Pro Gly Tyr Thr Ala Asn Gly Asn
705                 710                 715                 720
Ile Gln Met Asn Ala Pro Arg Lys Ser Val Gly Arg Asn Glu Glu Glu
                725                 730                 735
Arg Lys Trp Gly Phe Ser Arg Val Ser Ser Gly Gly Ser Phe Ser Val
            740                 745                 750
Leu Gly Val Pro Ala Gly Pro His Pro Asp Val Phe Pro Pro Cys Lys
        755                 760                 765
Ile Ile Asp Leu Glu Ala Val Asn Arg Arg Gly Ile Asp Pro Ile Leu
    770                 775                 780
Asp Ser Thr Trp Arg Arg Leu
785                 790
```

<210> 171
<211> 1491
<212> DNA
<213> Homo sapiens

<400> 171

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cctcctgcca gccaagtgaa gacatgctta cttccccttc accttccttc atgatgtggg 60
aagagtgctg caacccagcc ctagccaacg ccgcatgaga gggagtgtgc cgagggcttc 120
tgagaaggtt tctctcacat ctagaaagaa gcgcttaaga tgtggcagcc cctcttcttc 180
aagtggctct tgtcctgttg ccctgggagt tctcaaattg ctgcagcagc ctccacccag 240
cctgaggatg acatcaatac acagaggaag aagagtcagg aaaagatgag agaagttaca 300
gactctcctg ggcgaccccg agagcttacc attcctcaga cttcttcaca tggtgctaac 360
agatttgttc ctaaaagtaa agctctagag gccgtcaaat tggcaataga agccgggttc 420
caccatattg attctgcaca tgtttacaat aatgaggagc aggttggact ggccatccga 480
agcaagattg cagatggcag tgtgaagaga gaagacatat tctacacttc aaagctttgg 540
agcaattccc atcgaccaga gttggtccga ccagccttgg aaaggtcact gaaaaatctt 600
caattggact atgttgacct ctatcttatt cattttccag tgtctgtaaa gccaggtgag 660
gaagtgatcc caaaagatga aaatggaaaa atactatttg acacagtgga tctctgtgcc 720
acatgggagg ccatggagaa gtgtaaagat gcaggattgg ccaagtccat cggggtgtcc 780
aacttcaacc acaggctgct ggagatgatc ctcaacaagc cagggctcaa gtacaagcct 840
gtctgcaacc aggtggaatg tcatccttac ttcaaccaga gaaaactgct ggatttctgc 900
aagtcaaaag acattgttct ggttgcctat agtgctctgg gatcccatcg agaagaacca 960
tgggtggacc cgaactcccc ggtgctcttg gaggacccag tcctttgtgc cttggcaaaa 1020
aagcacaagc gaaccccagc cctgattgcc ctgcgctacc agctgcagcg tggggttgtg 1080
gtcctggcca agagctacaa tgagcagcgc atcagacaga acgtgcaggt gtttgaattc 1140
cagttgactt cagaggagat gaaagccata gatggcctaa acagaaatgt gcgatatttg 1200
acccttgata tttttgctgg ccccccctaat tatccatttt ctgatgaata ttaacatgga 1260
gggcattgca tgaggtctgc cagaaggccc tgcgtgtgga tggtgacaca gaggatggct 1320
ctatgctggt gactggacac atcgcctctg gttaaatctc tcctgcttgg cgacttcagt 1380
aagctacagc taagcccatc ggccggaaaa gaaagacaat aattttgttt ttcattttga 1440
aaaaattaaa tgctctctcc taaagattct tcacctaaaa aaaaaaaaaa a          1491
```

<210> 172
<211> 364
<212> PRT
<213> Homo sapiens

<400> 172

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Met Trp Gln Pro Leu Phe Phe Lys Trp Leu Leu Ser Cys Cys Pro Gly
```

```
 1               5                  10                  15
Ser Ser Gln Ile Ala Ala Ala Ser Thr Gln Pro Glu Asp Asp Ile
            20                  25                  30
Asn Thr Gln Arg Lys Lys Ser Gln Glu Lys Met Arg Glu Val Thr Asp
        35                  40                  45
Ser Pro Gly Arg Pro Arg Glu Leu Thr Ile Pro Gln Thr Ser Ser His
    50                  55                  60
Gly Ala Asn Arg Phe Val Pro Lys Ser Lys Ala Leu Glu Ala Val Lys
65                  70                  75                  80
Leu Ala Ile Glu Ala Gly Phe His His Ile Asp Ser Ala His Val Tyr
                85                  90                  95
Asn Asn Glu Glu Gln Val Gly Leu Ala Ile Arg Ser Lys Ile Ala Asp
            100                 105                 110
Gly Ser Val Lys Arg Glu Asp Ile Phe Tyr Thr Ser Lys Leu Trp Ser
        115                 120                 125
Asn Ser His Arg Pro Glu Leu Val Arg Pro Ala Leu Glu Arg Ser Leu
    130                 135                 140
Lys Asn Leu Gln Leu Asp Tyr Val Asp Leu Tyr Leu Ile His Phe Pro
145                 150                 155                 160
Val Ser Val Lys Pro Gly Glu Glu Val Ile Pro Lys Asp Glu Asn Gly
                165                 170                 175
Lys Ile Leu Phe Asp Thr Val Asp Leu Cys Ala Thr Trp Glu Ala Met
            180                 185                 190
Glu Lys Cys Lys Asp Ala Gly Leu Ala Lys Ser Ile Gly Val Ser Asn
        195                 200                 205
Phe Asn His Arg Leu Leu Glu Met Ile Leu Asn Lys Pro Gly Leu Lys
    210                 215                 220
Tyr Lys Pro Val Cys Asn Gln Val Glu Cys His Pro Tyr Phe Asn Gln
225                 230                 235                 240
Arg Lys Leu Leu Asp Phe Cys Lys Ser Lys Asp Ile Val Leu Val Ala
                245                 250                 255
Tyr Ser Ala Leu Gly Ser His Arg Glu Glu Pro Trp Val Asp Pro Asn
            260                 265                 270
Ser Pro Val Leu Leu Glu Asp Pro Val Leu Cys Ala Leu Ala Lys Lys
        275                 280                 285
His Lys Arg Thr Pro Ala Leu Ile Ala Leu Arg Tyr Gln Leu Gln Arg
    290                 295                 300
Gly Val Val Val Leu Ala Lys Ser Tyr Asn Glu Gln Arg Ile Arg Gln
305                 310                 315                 320
Asn Val Gln Val Phe Glu Phe Gln Leu Thr Ser Glu Glu Met Lys Ala
                325                 330                 335
Ile Asp Gly Leu Asn Arg Asn Val Arg Tyr Leu Thr Leu Asp Ile Phe
            340                 345                 350
Ala Gly Pro Pro Asn Tyr Pro Phe Ser Asp Glu Tyr
        355                 360
```

<210> 173
<211> 1988
<212> DNA
<213> Homo sapiens

<400> 173
cgggagccgc ctccccgcgg cctcttcgct tttgtggcgg cgcccgcgct cgcaggccac 60

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tctctgctgt cgcccgtccc gcgcgctcct ccgacccgct ccgctccgct ccgctcggcc 120
ccgcgccgcc cgtcaacatg atccgctgcg gcctggcctg cgagcgctgc cgctggatcc 180
tgcccctgct cctactcagc gccatcgcct tcgacatcat cgcgctggcc ggccgcggct 240
ggttgcagtc tagcgaccac ggccagacgt cctcgctgtg gtggaaatgc tcccaagagg 300
gcggcggcag cgggtcctac gaggagggct gtcagagcct catggagtac gcgtggggta 360
gagcagcggc tgccatgctc ttctgtggct tcatcatcct ggtgatctgt ttcatcctct 420
ccttcttcgc cctctgtgga ccccagatgc ttgtcttcct gagagtgatt ggaggtctcc 480
ttgccttggc tgctgtgttc cagatcatct ccctggtaat ttaccccgtg aagtacaccc 540
agaccttcac ccttcatgcc aaccctgctg tcacttacat ctataactgg gcctacggct 600
ttgggtgggc agccacgatt atcctgatcg gctgtgcctt cttcttctgc tgcctcccca 660
actacgaaga tgaccttctg ggcaatgcca agcccaggta cttctacaca tctgcctaac 720
ttgggaatga atgtgggaga aaatcgctgc tgctgagatg gactccagaa gaagaaactg 780
tttctccagg cgactttgaa cccatttttt ggcagtgttc atattattaa actagtcaaa 840
aatgctaaaa taatttggga gaaaatattt tttaagtagt gttatagttt catgtttatc 900
ttttattatg ttttgtgaag ttgtgtcttt tcactaatta cctatactat gccaatattt 960
ccttatatct atccataaca tttatactac atttgtaaga gaatatgcac gtgaaactta 1020
acactttata aggtaaaaat gaggtttcca agatttaata atctgatcaa gttcttgtta 1080
tttccaaata gaatggactt ggtctgttaa gggctaagga gaagaggaag ataaggttaa 1140
aagttgttaa tgaccaaaca ttctaaaaga aatgcaaaaa aaaagtttat tttcaagcct 1200
tcgaactatt taaggaaagc aaaatcattt cctaaatgca tatcatttgt gagaatttct 1260
cattaatatc ctgaatcatt catttcagct aaggcttcat gttgactcga tatgtcatct 1320
aggaaagtac tatttcatgg tccaaacctg ttgccatagt tggtaaggct ttcctttaag 1380
tgtgaaatat ttagatgaaa ttttctcttt taaagttctt tatagggtta gggtgtggga 1440
aaatgctata ttaataaatc tgtagtgttt tgtgtttata tgttcagaac cagagtagac 1500
tggattgaaa gatggactgg gtctaattta tcatgactga tagatctggt taagttgtgt 1560
agtaaagcat taggagggtc attcytgtca caaaagtgcc actaaaacag cctcaggaga 1620
ataaatgact tgctttttcta aatctcaggt ttatctgggc tctatcatat agacaggctt 1680
ctgatagttt gcarctgtaa gcagaaacct acatatagtt aaaatcctgg tctttcttgg 1740
taaacagatt ttaaatgtct gatataaaac atgccacagg agaattcggg gatttgagtt 1800
tctctgaata gcatatatat gatgcatcgg ataggtcatt atgatttttt accatttcga 1860
cttacataat gaaaaccaat tcattttaaa tatcagatta ttattttgta agttgtggaa 1920
aaagctaatt gtagttttca ttatgaagtt ttcccaataa accaggtatt ctaaaaaaaa 1980
aaaaaaaa                                                          1988
```

<210> 174
<211> 238
<212> PRT
<213> Homo sapiens

<400> 174

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Gly Ala Ala Ser Pro Arg Pro Leu Arg Phe Cys Gly Gly Ala Arg Ala
 1               5                  10                  15
Arg Arg Pro Leu Ser Ala Val Ala Arg Pro Ala Arg Ser Ser Asp Pro
            20                  25                  30
Leu Arg Ser Ala Pro Leu Gly Pro Ala Pro Pro Val Asn Met Ile Arg
        35                  40                  45
Cys Gly Leu Ala Cys Glu Arg Cys Arg Trp Ile Leu Pro Leu Leu Leu
    50                  55                  60
Leu Ser Ala Ile Ala Phe Asp Ile Ile Ala Leu Ala Gly Arg Gly Trp
65                  70                  75                  80
Leu Gln Ser Ser Asp His Gly Gln Thr Ser Ser Leu Trp Trp Lys Cys
                85                  90                  95
Ser Gln Glu Gly Gly Gly Ser Gly Ser Tyr Glu Glu Gly Cys Gln Ser
            100                 105                 110
```

```
Leu Met Glu Tyr Ala Trp Gly Arg Ala Ala Ala Ala Met Leu Phe Cys
        115                 120                 125
Gly Phe Ile Ile Leu Val Ile Cys Phe Ile Leu Ser Phe Phe Ala Leu
    130                 135                 140
Cys Gly Pro Gln Met Leu Val Phe Leu Arg Val Ile Gly Gly Leu Leu
145                 150                 155                 160
Ala Leu Ala Ala Val Phe Gln Ile Ile Ser Leu Val Ile Tyr Pro Val
                165                 170                 175
Lys Tyr Thr Gln Thr Phe Thr Leu His Ala Asn Pro Ala Val Thr Tyr
            180                 185                 190
Ile Tyr Asn Trp Ala Tyr Gly Phe Gly Trp Ala Ala Thr Ile Ile Leu
        195                 200                 205
Ile Gly Cys Ala Phe Phe Phe Cys Cys Leu Pro Asn Tyr Glu Asp Asp
    210                 215                 220
Leu Leu Gly Asn Ala Lys Pro Arg Tyr Phe Tyr Thr Ser Ala
225                 230                 235
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<210> 175
<211> 4181
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 3347, 3502, 3506, 3520, 3538, 3549, 3646, 3940, 3968, 3974, 4036, 4056, 4062, 4080, 4088, 4115
<223> n = A,T,C or G

<400> 175

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agacaaggaa aaaacaagcc tcggatctga tttttcactc ctcgttcttg tgcttggttc 120
ttactgtgtt tgtgtatttt aaaggcgaga agacgagggg aacaaaacca gctggatcca 180
tccatcaccg tgggtggttt taatttttcg ttttttctcg ttatttttt ttaaacaacc 240
actcttcaca atgaacaaac tgtatatcgg aaacctcagc gagaacgccg ccccctcgga 300
cctagaaagt atcttcaagg acgccaagat cccggtgtcg ggacccttcc tggtgaagac 360
tggctacgcg ttcgtggact gcccggacga gagctgggcc ctcaaggcca tcgaggcgct 420
ttcaggtaaa atagaactgc acgggaaacc catagaagtt gagcactcgg tcccaaaaag 480
gcaaaggatt cggaaacttc agatacgaaa tatcccgcct catttacagt gggaggtgct 540
ggatagttta ctagtccagt atggagtggt ggagagctgt gagcaagtga acactgactc 600
ggaaactgca gttgtaaatg taacctattc cagtaaggac caagctagac aagcactaga 660
caaactgaat ggatttcagt tagagaattt caccttgaaa gtagcctata tccctgatga 720
aatggccgcc cagcaaaacc ccttgcagca gccccgaggt cgccgggggc ttgggcagag 780
gggctcctca aggcaggggt ctccaggatc cgtatccaag cagaaaccat gtgatttgcc 840
tctgcgcctg ctggttccca cccaatttgt tggagccatc ataggaaaag aaggtgccac 900
cattcggaac atcaccaaac agacccagtc taaaatcgat gtccaccgta aagaaaatgc 960
gggggctgct gagaagtcga ttactatcct ctctactcct gaaggcacct ctgcggcttg 1020
taagtctatt ctggagatta tgcataagga agctcaagat ataaaattca cagaagagat 1080
ccccttgaag attttagctc ataataactt tgttggacgt cttattggta aagaaggaag 1140
aaatcttaaa aaaattgagc aagacacaga cactaaaatc acgatatctc cattgcagga 1200
attgacgctg tataatccag aacgcactat tacagttaaa ggcaatgttg agacatgtgc 1260
caaagctgag gaggagatca tgaagaaaat cagggagtct tatgaaaatg atattgcttc 1320
tatgaatctt caagcacatt taattcctgg attaaatctg aacgccttgg gtctgttccc 1380
acccacttca gggatgccac ctcccacctc agggcccccc tcagccatga ctcctcccta 1440
```

cccgcagttt gagcaatcag aaacggagac tgttcatcag tttatcccag ctctatcagt 1500
cggtgccatc atcggcaagc agggccagca catcaagcag ctttctcgct ttgctggagc 1560
ttcaattaag attgctccag cggaagcacc agatgctaaa gtgaggatgg tgattatcac 1620
tggaccacca gaggctcagt tcaaggctca gggaagaatt tatggaaaaa ttaaagaaga 1680
aaactttgtt agtcctaaag aagaggtgaa acttgaagct catatcagag tgccatcctt 1740
tgctgctggc agagttattg gaaaaggagg caaaacggtg aatgaacttc agaatttgtc 1800
aagtgcagaa gttgttgtcc ctcgtgacca gacacctgat gagaatgacc aagtggttgt 1860
caaaataact ggtcacttct atgcttgcca ggttgcccag agaaaaattc aggaaattct 1920
gactcaggta aagcagcacc aacaacagaa ggctctgcaa agtggaccac ctcagtcaag 1980
acggaagtaa aggctcagga aacagcccac cacagaggca gatgccaaac caaagacaga 2040
ttgcttaacc aacagatggg cgctgacccc ctatccagaa tcacatgcac aagtttttac 2100
ctagccagtt gtttctgagg accaggcaac ttttgaactc ctgtctctgt gagaatgtat 2160
actttatgct ctctgaaatg tatgacaccc agctttaaaa caaacaaaca aacaaacaaa 2220
aaaagggtgg gggagggagg gaaagagaag agctctgcac ttccctttgt tgtagtctca 2280
cagtataaca gatattctaa ttcttcttaa tattccccca taatgccaga aattggctta 2340
atgatgcttt cactaaattc atcaaataga ttgctcctaa atccaattgt taaaattgga 2400
tcagaataat tatcacagga acttaaatgt taagccatta gcatagaaaa actgttctca 2460
gttttatttt tacctaacac taacatgagt aacctaaggg aagtgctgaa tggtgttggc 2520
aggggtatta aacgtgcatt tttactcaac tacctcaggt attcagtaat acaatgaaaa 2580
gcaaaattgt tccttttttt tgaaaatttt atatacttta taatgataga agtccaaccg 2640
ttttttaaaa aataaattta aaatttaaca gcaatcagct aacaggcaaa ttaagatttt 2700
tacttctggc tggtgacagt aaagctggaa aattaatttc agggtttttt gaggcttttg 2760
acacagttat tagttaaatc aaatgttcaa aaatacggag cagtgcctag tatctggaga 2820
gcagcactac catttattct ttcatttata gttgggaaag tttttgacgg tactaacaaa 2880
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gtttagctac atgattgaat gcataataaa tgctttgtgc ttctgactat caatacctaa 3000
agaaagtgca tcagtgaaga gatgcaagac tttcaactga ctggcaaaaa gcaagcttta 3060
gcttgtctta taggatgctt agtttgccac tacacttcag accaatggga cagtcataga 3120
tggtgtgaca gtgtttaaac gcaacaaaag gctacatttc catggggcca gcactgtcat 3180
gagcctcact aagctatttt gaagattttt aagcactgat aaattaaaaa aaaaaaaaaa 3240
aaattagact ccaccttaag tagtaaagta taacaggatt tctgtatact gtgcaatcag 3300
ttctttgaaa aaaaagtcaa aagatagaga atacaagaaa agttttnggg atataatttg 3360
aatgactgtg aaaacatatg acctttgata acgaactcat ttgctcactc cttgacagca 3420
aagcccagta cgtacaattg tgttgggtgt gggtggtctc caaggccacg ctgctctctg 3480
aattgatttt ttgagttttg gnttgnaaga tgatcacagn catgttacac tgatcttnaa 3540
ggacatatnt tataaccctt taaaaaaaaa atcccctgcc tcattcttat ttcgagatga 3600
atttcgatac agactagatg tctttctgaa gatcaattag acattntgaa aatgatttaa 3660
agtgttttcc ttaatgttct ctgaaaacaa gtttcttttg tagttttaac caaaaaagtg 3720
ccctttttgt cactggtttc tcctagcatt catgattttt ttttcacaca atgaattaaa 3780
attgctaaaa tcatggactg gctttctggt tggatttcag gtaagatgtg tttaaggcca 3840
gagcttttct cagtatttga ttttttttccc caatatttga ttttttaaaa atatacacat 3900
aggagctgca tttaaaacct gctggtttaa attctgtcan atttcacttc tagcctttta 3960
gtatggcnaa tcanaattta cttttactta agcatttgta atttggagta tctggtacta 4020
gctaagaaat aattcnataa ttgagttttg tactcnccaa anatgggtca ttcctcatgn 4080
ataatgtncc cccaatgcag cttcattttc caganacctt gacgcaggat aaatttttttc 4140
atcatttagg tccccaaaaa aaaaaaaaaa aaaaaaaaaa a 4181

<210> 176
<211> 579
<212> PRT
<213> Homo sapiens

<400> 176
Met Asn Lys Leu Tyr Ile Gly Asn Leu Ser Glu Asn Ala Ala Pro Ser

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 1               5                  10                  15
Asp Leu Glu Ser Ile Phe Lys Asp Ala Lys Ile Pro Val Ser Gly Pro
            20                  25                  30
Phe Leu Val Lys Thr Gly Tyr Ala Phe Val Asp Cys Pro Asp Glu Ser
        35                  40                  45
Trp Ala Leu Lys Ala Ile Glu Ala Leu Ser Gly Lys Ile Glu Leu His
    50                  55                  60
Gly Lys Pro Ile Glu Val Glu His Ser Val Pro Lys Arg Gln Arg Ile
65                  70                  75                  80
Arg Lys Leu Gln Ile Arg Asn Ile Pro Pro His Leu Gln Trp Glu Val
                85                  90                  95
Leu Asp Ser Leu Leu Val Gln Tyr Gly Val Val Glu Ser Cys Glu Gln
            100                 105                 110
Val Asn Thr Asp Ser Glu Thr Ala Val Val Asn Val Thr Tyr Ser Ser
        115                 120                 125
Lys Asp Gln Ala Arg Gln Ala Leu Asp Lys Leu Asn Gly Phe Gln Leu
    130                 135                 140
Glu Asn Phe Thr Leu Lys Val Ala Tyr Ile Pro Asp Glu Met Ala Ala
145                 150                 155                 160
Gln Gln Asn Pro Leu Gln Gln Pro Arg Gly Arg Arg Gly Leu Gly Gln
                165                 170                 175
Arg Gly Ser Ser Arg Gln Gly Ser Pro Gly Ser Val Ser Lys Gln Lys
            180                 185                 190
Pro Cys Asp Leu Pro Leu Arg Leu Leu Val Pro Thr Gln Phe Val Gly
        195                 200                 205
Ala Ile Ile Gly Lys Glu Gly Ala Thr Ile Arg Asn Ile Thr Lys Gln
    210                 215                 220
Thr Gln Ser Lys Ile Asp Val His Arg Lys Glu Asn Ala Gly Ala Ala
225                 230                 235                 240
Glu Lys Ser Ile Thr Ile Leu Ser Thr Pro Glu Gly Thr Ser Ala Ala
                245                 250                 255
Cys Lys Ser Ile Leu Glu Ile Met His Lys Glu Ala Gln Asp Ile Lys
            260                 265                 270
Phe Thr Glu Glu Ile Pro Leu Lys Ile Leu Ala His Asn Asn Phe Val
        275                 280                 285
Gly Arg Leu Ile Gly Lys Glu Gly Arg Asn Leu Lys Lys Ile Glu Gln
    290                 295                 300
Asp Thr Asp Thr Lys Ile Thr Ile Ser Pro Leu Gln Glu Leu Thr Leu
305                 310                 315                 320
Tyr Asn Pro Glu Arg Thr Ile Thr Val Lys Gly Asn Val Glu Thr Cys
                325                 330                 335
Ala Lys Ala Glu Glu Glu Ile Met Lys Lys Ile Arg Glu Ser Tyr Glu
            340                 345                 350
Asn Asp Ile Ala Ser Met Asn Leu Gln Ala His Leu Ile Pro Gly Leu
        355                 360                 365
Asn Leu Asn Ala Leu Gly Leu Phe Pro Pro Thr Ser Gly Met Pro Pro
    370                 375                 380
Pro Thr Ser Gly Pro Pro Ser Ala Met Thr Pro Pro Tyr Pro Gln Phe
385                 390                 395                 400
Glu Gln Ser Glu Thr Glu Thr Val His Gln Phe Ile Pro Ala Leu Ser
                405                 410                 415
Val Gly Ala Ile Ile Gly Lys Gln Gly Gln His Ile Lys Gln Leu Ser
            420                 425                 430
Arg Phe Ala Gly Ala Ser Ile Lys Ile Ala Pro Ala Glu Ala Pro Asp
```

```
        435                 440                 445
Ala Lys Val Arg Met Val Ile Ile Thr Gly Pro Pro Glu Ala Gln Phe
    450                 455                 460
Lys Ala Gln Gly Arg Ile Tyr Gly Lys Ile Lys Glu Glu Asn Phe Val
465                 470                 475                 480
Ser Pro Lys Glu Glu Val Lys Leu Glu Ala His Ile Arg Val Pro Ser
                485                 490                 495
Phe Ala Ala Gly Arg Val Ile Gly Lys Gly Gly Lys Thr Val Asn Glu
            500                 505                 510
Leu Gln Asn Leu Ser Ser Ala Glu Val Val Val Pro Arg Asp Gln Thr
        515                 520                 525
Pro Asp Glu Asn Asp Gln Val Val Val Lys Ile Thr Gly His Phe Tyr
    530                 535                 540
Ala Cys Gln Val Ala Gln Arg Lys Ile Gln Glu Ile Leu Thr Gln Val
545                 550                 555                 560
Lys Gln His Gln Gln Gln Lys Ala Leu Gln Ser Gly Pro Pro Gln Ser
                565                 570                 575
Arg Arg Lys
```

<210> 177
<211> 401
<212> DNA
<213> Homo sapiens

<400> 177
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agatccaaac aaatacacat tctgtgtttt agctcagtgt tttctaaaaa aagaaactgc 120
cacacagcaa aaaattgttt actttgttgg acaaaccaaa tcagttctca aaaaatgacc 180
ggtgcttata aaaagttata aatatcgagt agctctaaaa caaaccacct gaccaagagg 240
gaagtgagct tgtgcttagt atttacattg gatgccagtt ttgtaatcac tgacttatgt 300
gcaaactggt gcagaaattc tataaactct ttgctgtttt tgatacctgc tttttgtttc 360
attttgtttt gttttgtaaa aatgataaaa cttcagaaaa t 401

<210> 178
<211> 561
<212> DNA
<213> Homo sapiens

<400> 178
acgcctttca agggtgtacg caaagcactc attgataccc ttttggatgg ctatgaaaca 60
gcccgctatg ggacaggggt ctttggccag aatgagtacc tacgctatca ggaggccctg 120
agtgagctgg ccactgcggt taaagcacga attgggagct ctcagcgaca tcaccagtca 180
gcagccaaag acctaactca gtcccctgag gtctccccaa caaccatcca ggtgacatac 240
ctcccctcca gtcagaagag taaacgtgcc aagcacttcc ttgaattgaa gagctttaag 300
gataactata acacattgga gagtactctg tgacggagct gaaggactct tgccgtagat 360
taagccagtc agttgcaatg tgcaagacag gctgcttgcc gggccgccct cggaacatct 420
ggcccagcag gcccagactg tatccatcca agttcccgtt gtatccagag ttcttagagc 480
ttgtgtctaa agggtaattc cccaaccctt ccttatgagc atttttagaa cattggctaa 540
gactattttc ccccagtagc g 561

<210> 179
<211> 521

<212> DNA
<213> Homo sapiens

<400> 179
cccaacgcgt ttgcaaatat tcccctggta gcctacttcc ttacccccga atattggtaa 60
gatcgagcaa tggcttcagg acatgggttc tcttctcctg tgatcattca agtgctcact 120
gcatgaagac tggcttgtct cagtgtttca acctcaccag ggctgtctct tggtccacac 180
ctcgctccct gttagtgccg tatgacagcc cccatcaaat gaccttggcc aagtcacggt 240
ttctctgtgg tcaaggttgg ttggctgatt ggtggaaagt agggtggacc aaaggaggcc 300
acgtgagcag tcagcaccag ttctgcacca gcagcgcctc cgtcctagtg ggtgttcctg 360
tttctcctgg ccctgggtgg gctagggcct gattcgggaa gatgcctttg cagggagggg 420
aggataagtg ggatctacca attgattctg gcaaaacaat ttctaagatt tttttgcttt 480
atgtgggaaa cagatctaaa tctcatttta tgctgtattt t 521

<210> 180
<211> 417
<212> DNA
<213> Homo sapiens

<400> 180
ggtggaattc gccgaagatg gcggaggtgc aggtcctggt gcttgatggt cgaggccatc 60
tcctgggccg cctggcggcc atcgtggcta aacaggtact gctgggccgg aaggtggtgg 120
tcgtacgctg tgaaggcatc aacatttctg gcaatttcta cagaaacaag ttgaagtacc 180
tggctttcct ccgcaagcgg atgaacacca acccttcccg aggcccctac cacttccggg 240
cccccagccg catcttctgg cggaccgtgc gaggtatgct gccccacaaa accaagcgag 300
gccaggccgc tctggaccgt ctcaaggtgt ttgacggcat cccaccgccc tacgacaaga 360
aaaagcggat ggtggttcct gctgccctca aggtcgtgcg tctgaagcct acaagaa 417

<210> 181
<211> 283
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 35
<223> n = A,T,C or G

<400> 181
gatttcttct aaataggatg taaaacttct ttcanattac tcttcctcag tcctgcctgc 60
caagaactca agtgtaactg tgataaaata acctttccca ggtatattgg caggtatgtg 120
tgtaatctca gaatacacag gtgacataga tatgatatga caactggtaa tggtggattc 180
atttacattg tttacacttc tatgaccagg ccttaaggga aggtcagttt tttaaaaaac 240
caagtagtgt cttcctacct atctccagat acatgtcaaa aaa 283

<210> 182
<211> 401
<212> DNA
<213> Homo sapiens

<400> 182
atattcttgc tgcttatgca gctgacattg ttgccctccc taaagcaacc aagtagcctt 60
tatttcccac agtgaaagaa aacgctggcc tatcagttac attacaaaag gcagatttca 120
agaggattga gtaagtagtt ggatggcttt cataaaaaca agaattcaag aagaggattc 180

atgctttaag aaacatttgt tatacattcc tcacaaatta tacctgggat aaaaactatg 240
tagcaggcag tgtgttttcc ttccatgtct ctctgcacta cctgcagtgt gtcctctgag 300
gctgcaagtc tgtcctatct gaattcccag cagaagcact aagaagctcc accctatcac 360
ctagcagata aaactatggg gaaaacttaa atctgtgcat a 401

<210> 183
<211> 366
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 325
<223> n = A,T,C or G

<400> 183
accgtgtcca agtttttaga acccttgtta gccagaccga ggtgtcctgg tcaccgtttc 60
accatcatgc tttgatgttc ccctgtcttt ctctcttctg ctctcaagag caaaggttaa 120
tttaaggaca aagatgaagt cactgtaaac taatctgtca ttgtttttac cttccttttc 180
tttttcagtg cagaaattaa aagtaagtat aaagcaccgt gattgggagt gtttttgcgt 240
gtgtcggaat cactggtaaa tgttggctga gaacaatccc tccccttgca cttgtgaaaa 300
cactttgagc gctttaagag attancctga gaaataatta aatatctttt ctcttcaaaa 360
aaaaaa 366

<210> 184
<211> 370
<212> DNA
<213> Homo sapiens

<400> 184
tcttacttca aaagaaaaat aaacataaaa aataagttgc tggttcctaa caggaaaaat 60
tttaataatt gtactgagag aaactgctta cgtacacatt gcagatcaaa tatttggagt 120
taaaatgtta gtctacatag atgggtgatt gtaactttat tgccattaaa agatttcaaa 180
ttgcattcat gcttctgtgt acacataatg aaaaatgggc aaataatgaa gatctctcct 240
tcagtctgct ctgtttaatt ctgctgtctg ctcttctcta atgctgcgtc cctaattgta 300
cacagtttag tgatatctag gagtataaag ttgtcgccca tcaataaaaa tcacaaagtt 360
ggtttaaaaa 370

<210> 185
<211> 107
<212> DNA
<213> Homo sapiens

<400> 185
ctcatattat tttccttttg agaaattgga aactctttct gttgctatta tattaataaa 60
gttggtgttt attttctggt agtcaccttc cccatttaaa aaaaaaa 107

<210> 186
<211> 309
<212> DNA
<213> Homo sapiens

<400> 186
gaaaggatgg ctctggttgc cacagagctg ggacttcatg ttcttctaga gagggccaca 60

agagggccac aggggtggcc gggagttgtc agctgatgcc tgctgagagg caggaattgt 120
gccagtgagt gacagtcatg agggagtgtc tcttcttggg gaggaaagaa ggtagagcct 180
ttctgtctga atgaaaggcc aaggctacag tacagggccc cgccccagcc agggtgttaa 240
tgcccacgta gtggaggcct ctggcagatc ctgcattcca aggtcactgg actgtacgtt 300
tttatggtt 309

<210> 187
<211> 477
<212> DNA
<213> Homo sapiens

<400> 187
ttcagtccta gcaagaagcg agaattctga gatcctccag aaagtcgagc agcacccacc 60
tccaacctcg ggccagtgtc ttcaggcttt actggggacc tgcgagctgg cctaatgtgg 120
tggcctgcaa gccaggccat ccctgggcgc cacagacgag ctccgagcca ggtcaggctt 180
cggaggccac aagctcagcc tcaggcccag gcactgattg tggcagaggg gccactaccc 240
aaggtctagc taggcccaag acctagttac ccagacagtg agaagcccct ggaaggcaga 300
aaagttggga gcatggcaga cagggaaggg aaacattttc agggaaaaga catgtatcac 360
atgtcttcag aagcaagtca ggtttcatgt aaccgagtgt cctcttgcgt gtccaaaagt 420
agcccagggc tgtagcacag gcttcacagt gattttgtgt tcagccgtga gtcacac 477

<210> 188
<211> 220
<212> DNA
<213> Homo sapiens

<400> 188
taaatatggt agatattaat attcctctta gatgaccagt gattccaatt gtcccaagtt 60
ttaaataagt accctgtgag tatgagataa attagtgaca atcagaacaa gtttcagtat 120
cagatgttca agaggaagtt gctattgcat tgattttaat atttgtacat aaacactgat 180
ttttttgagc attattttgt atttgttgta ctttaatacc 220

<210> 189
<211> 417
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 76, 77
<223> n = A,T,C or G

<400> 189
accatcttga cagaggatac atgctcccaa aacgtttgtt accacactta aaaatcactg 60
ccatcattaa gcatcnnttt caaaattata gccattcatg atttactttt tccagatgac 120
tatcattatt ctagtccttt gaatttgtaa ggggaaaaaa aacaaaaaca aaaacttacg 180
atgcactttt ctccagcaca tcagatttca aattgaaaat taaagacatg ctatggtaat 240
gcacttgcta gtactacaca ctttgtacaa caaaaaacag aggcaagaaa caacggaaag 300
agaaaagcct tcctttgttg gcccttaaac tgagtcaaga tctgaaatgt agagatgatc 360
tctgacgata cctgtatgtt cttattgtgt aaataaaatt gctggtatga aatgaca 417

<210> 190
<211> 497
<212> DNA

<213> Homo sapiens

<400> 190
gcactgcggc gctctcccgt cccgcggtgg ttgctgctgc tgccgctgct gctgggcctg 60
aacgcaggag ctgtcattga ctggcccaca gaggagggca aggaagtatg ggattatgtg 120
acggtccgca aggatgccta catgttctgg tggctctatt atgccaccaa ctcctgcaag 180
aacttctcag aactgccccc ggtcatgtgg cttcagggcg gtccaggcgg ttctagcact 240
ggatttggaa actttgagga aattgggccc cttgacagtg atctcaaacc acggaaaacc 300
acctggctcc aggctgccag tctcctattt gtggataatc ccgtgggcac tgggttcagt 360
tatgtgaatg gtagtggtgc ctatgccaag gacctggcta tggtggcttc agacatgatg 420
gttctcctga agaccttctt cagttgccac aaagaattcc agacagttcc attctacatt 480
ttctcagagt cctatgg 497

<210> 191
<211> 175
<212> DNA
<213> Homo sapiens

<400> 191
atgttgaata ttttgcttat taactttgtt tattgtcttc tccctcgatt agaatattag 60
ctacttgagt acaaggattt gagcctgtta cattcactgc tgaattttag gctcctggaa 120
gatacccagc attcaataga gaccacacaa taaatatatg tcaaataaaa aaaaa 175

<210> 192
<211> 526
<212> DNA
<213> Homo sapiens

<400> 192
agtaaacatt attatttttt ttatatttgc aaaggaaaca tatctaatcc ttcctataga 60
aagaacagta ttgctgtaat tccttttctt ttcttcctca tttcctctgc cccttaaaag 120
attgaagaaa gagaaacttg tcaactcata tccacgttat ctagcaaagt acataagaat 180
ctatcactaa gtaatgtatc cttcagaatg tgttggttta ccagtgacac cccatattca 240
tcacaaaatt aaagcaagaa gtccatagta atttatttgc taatagtgga tttttaatgc 300
tcagagtttc tgaggtcaaa ttttatcttt tcacttacaa gctctatgat cttaaataat 360
ttacttaatg tattttggtg tattttcctc aaattaatat tggtgttcaa gactatatct 420
aattcctctg atcactttga gaaacaaact tttattaaat gtaaggcact tttctatgaa 480
ttttaaatat aaaaataaat attgttctga ttattactga aaaaaa 526

<210> 193
<211> 553
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 290, 300, 411, 441
<223> n = A,T,C or G

<400> 193
tccattgtgg tggaattcgc tctctggtaa aggcgtgcag gtgttggccg cggcctctga 60
gctgggatga gccgtgctcc cggtggaagc aagggagccc agccggagcc atggccagta 120
cagtggtagc agttggactg accattgctg ctgcaggatt tgcaggccgt tacgttttgc 180
aagccatgaa gcatatggag cctcaagtaa aacaagtttt tcaaagccta ccaaaatctg 240

ccttcagtgg tggctattat agaggtgggt ttgaacccaa aatgacaaan cgggaagcan 300
cattaatact aggtgtaagc cctactgcca ataaagggaa aataagagat gctcatcgac 360
gaattatgct tttaaatcat cctgacaaag gaggatctcc ttatatagca nccaaaatca 420
atgaagctaa agatttacta naaggtcaag ctaaaaaatg aagtaaatgt atgatgaatt 480
ttaagttcgt attagtttat gtatatgagt actaagtttt tataataaaa tgcctcagag 540
ctacaatttt aaa 553

<210> 194
<211> 320
<212> DNA
<213> Homo sapiens

<400> 194
cccttcccaa tccatcagta aagaccccat ctgccttgtc catgccgttt cccaacaggg 60
atgtcacttg atatgagaat ctcaaatctc aatgccttat aagcattcct tcctgtgtcc 120
attaagactc tgataattgt ctcccctcca taggaatttc tcccaggaaa gaaatatatc 180
cccatctccg tttcatatca gaactaccgt ccccgatatt cccttcagag agattaaaga 240
ccagaaaaaa gtgagcctct tcatctgcac ctgtaatagt ttcagttcct attttcttcc 300
attgacccat atttatacct 320

<210> 195
<211> 320
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 203, 218
<223> n = A,T,C or G

<400> 195
aagcatgacc tggggaaatg gtcagacctt gtattgtgtt tttggccttg aaagtagcaa 60
gtgaccagaa tctgccatgg caacaggctt taaaaaagac ccttaaaaag acactgtctc 120
aactgtggtg ttagcaccag ccagctctct gtacatttgc tagcttgtag ttttctaaga 180
ctgagtaaac ttcttatttt tanaaagggg aggctggntt gtaactttcc ttgtacttaa 240
ttgggtaaaa gtcttttcca caaaccacca tctattttgt gaactttgtt agtcatcttt 300
tatttggtaa attatgaact 320

<210> 196
<211> 357
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 36
<223> n = A,T,C or G

<400> 196
atataaaata atacgaaact ttaaaaagca ttggantgtc agtatgttga atcagtagtt 60
tcactttaac tgtaaacaat ttcttaggac accatttggg ctagtttctg tgtaagtgta 120
aatactacaa aaacttattt atactgttct tatgtcattt gttatattca tagatttata 180
tgatgatatg acatctggct aaaaagaaat tattgcaaaa ctaaccacta tgtacttttt 240
tataaatact gtatggacaa aaaatggcat tttttatatt aaattgttta gctctggcaa 300

aaaaaaaaaa ttttaagagc tggtactaat aaaggattat tatgactgtt aaaaaaa 357

<210> 197
<211> 565
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 27
<223> n = A,T,C or G

<400> 197
tcagctgagt accatcagga tatttanccc tttaagtgct gttttgggag tagaaaacta 60
aagcaacaat acttcctctt gacagctttg attggaatgg ggttattaga tcattcacct 120
tggtcctaca ctttttagga tgcttggtga acataacacc acttataatg aacatccctg 180
gttcctatat tttgggctat gtgggtagga attgttactt gttactgcag cagcagccct 240
agaaagtaag cccagggctt cagatctaag ttagtccaaa agctaaatga tttaaagtca 300
agttgtaatg ctaggcataa gcactctata atacattaaa ttataggccg agcaattagg 360
gaatgtttct gaaacattaa acttgtattt atgtcactaa aattctaaca caaacttaaa 420
aaatgtgtct catacatatg ctgtactagg cttcatcatg catttctaaa tttgtgtatg 480
atttgaatat atgaaagaat ttatacaaga gtgttattta aaattattaa aaataaatgt 540
atataatttg tacctattgt aaaaa 565

<210> 198
<211> 484
<212> DNA
<213> Homo sapiens

<400> 198
tatgtaagta ttggtgtctg ctttaaaaaa ggagacccag acttcacctg tccttttaa 60
acatttgaga acagtgttac tctgagcagt tgggccacct tcaccttatc cgacagctga 120
ctgttggatg tgtccattgt cgccagtttg gctgttgccc ggacaggaca ggacctccat 180
tgggcgcagc agcaggtggc aggggtgtgg cttgaggtgg gtggcagcgt ctggtcctcc 240
tctctggtgc tttctgagag ggtctctaaa gcagagtgtg gttggcctgg gggaaggcag 300
agcacgtatt tctcccctct agtacctctg catttgtgag tgttccctct ggctttctga 360
agggcagcag actcttgagt atactgcaga ggacatgctt tatcagtagg tcctgagggc 420
tccaggggct caactgacca agtaacacag aagttggggt atgtggccta tttgggtcgg 480
aaac 484

<210> 199
<211> 429
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 77, 88, 134, 151, 189, 227, 274, 319
<223> n = A,T,C or G

<400> 199
gcttatgttt tttgttttaa cttttgtttt ttaacattta gaatattaca ttttgtatta 60
tacagtacct ttctcanaca ttttgtanaa ttcatttcgg cagctcacta ggattttgct 120
gaacattaaa aagngtgata gcgatattag ngccaatcaa atggaaaaaa ggtagtctta 180

ataaacaana cacaacgttt ttatacaaca tactttaaaa tattaanaaa actccttaat 240
attgtttcct attaagtatt attctttggg caanattttc tgatgctttt gattttctct 300
caatttagca tttgctttng gttttttttct ctatttagca ttctgttaag gcacaaaaac 360
tatgtactgt atgggaaatg ttgtaaatat tacctttttcc acattttaaa cagacaactt 420
tgaatccaa 429

<210> 200
<211> 279
<212> DNA
<213> Homo sapiens

<400> 200
gctttttga ggaattacag ggaagctcct ggaattgtac atggatatct ttatccctag 60
ggggaaatca aggagctggg caccctaat tctttatgga agtgtttaaa actattttaa 120
ttttattaca agtattacta gagtagtggt tctactctaa gatttcaaaa gtgcatttaa 180
aatcatacat gttcccgcct gcaaatatat tgttattttg gtggagaaaa aaatagtata 240
ttctacataa aaaattaaag atattaacta agaaaaaaa 279

<210> 201
<211> 569
<212> DNA
<213> Homo sapiens

<400> 201
taggtcagta tttttagaaa ctcttaatag ctcatactct tgataccaaa agcagccctg 60
attgttaaag cacacacctg cacaagaagc agtgatggtt gcatttacat ttcctgggtg 120
cacaaaaaaa aattctcaaa aagcaaggac ttacgctttt tgcaaagcct ttgagaagtt 180
actggatcat aggaagctta taacaagaat ggaagattct taaataactc actttctttg 240
gtatccagta acagtagatg ttcaaaatat gtagctgatt aataccagca ttgtgaacgc 300
tgtacaacct tgtggttatt actaagcaag ttactactag cttctgaaaa gtagcttcat 360
aattaatgtt atttatacac tgccttccat gacttttact ttgccctaag ctaatctcca 420
aaatctgaaa tgctactcca atatcagaaa aaaaggggga ggtggaatta tatttcctgt 480
gattttaaga gtacagagaa tcatgcacat ctctgattag ttcatatatg tctagtgtgt 540
aataaaagtc aaagatgaac tctcaaaaa 569

<210> 202
<211> 501
<212> DNA
<213> Homo sapiens

<400> 202
attaataggc ttaataattg ttggcaagga tccttttgct ttctttggca tgcaagctcc 60
tagcatctgg cagtggggcc aagaaaataa ggtttatgca tgtatgatgg ttttcttctt 120
gagcaacatg attgagaacc agtgtatgtc aacaggtgca tttgagataa ctttaaatga 180
tgtacctgtg tggtctaagc tggaatctgg tcaccttcca tccatgcaac aacttgttca 240
aattcttgac aatgaaatga agctcaatgt gcatatggat tcaatcccac accatcgatc 300
atagcaccac ctatcagcac tgaaaactct tttgcattaa gggatcattg caagagcagc 360
gtgactgaca ttatgaaggc ctgtactgaa gacagcaagc tgttagtaca gaccagatgc 420
tttcttggca ggctcgttgt acctcttgga aaacctcaat gcaagatagt gtttcagtgc 480
tggcatattt tggaattctg c 501

<210> 203
<211> 261
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 36, 96
<223> n = A,T,C or G

<400> 203
gacaagctcc tggtcttgag atgtcttctc gttaangaga tgggcctttt ggaggtaaag 60
gataaaatga atgagttctg tcatgattca ctattntata acttgcatga cctttactgt 120
gttagctctt tgaatgttct tgaaatttta gactttcttt gtaaacaaat gatatgtcct 180
tatcattgta taaaagctgt tatgtgcaac agtgtggaga ttccttgtct gatttaataa 240
aatacttaaa cactgaaaaa a 261

<210> 204
<211> 421
<212> DNA
<213> Homo sapiens

<400> 204
agcatctttt ctacaacgtt aaaattgcag aagtagctta tcattaaaaa acaacaacaa 60
caacaataac aataaatcct aagtgtaaat cagttattct acccccctacc aaggatatca 120
gcctgttttt tccctttttt ctcctgggaa taattgtggg cttcttccca aatttctaca 180
gcctctttcc tcttctcatg cttgagcttc cctgtttgca cgcatgcgtg tgcaggactg 240
gcttgtgtgc ttggactcgg ctccaggtgg aagcatgctt tcccttgtta ctgttggaga 300
aactcaaacc ttcaagccct aggtgtagcc attttgtcaa gtcatcaact gtatttttgt 360
actggcatta acaaaaaaag aagataaaat attgtaccat taaactttaa taaaacttta 420
a 421

<210> 205
<211> 460
<212> DNA
<213> Homo sapiens

<400> 205
tactctcaca atgaaggacc tggaatgaaa aatctgtgtc taaacaagtc ctctttagat 60
tttagtgcaa atccagagcc agcgtcggtt gcctcgagta attctttcat gggtaccttt 120
ggaaaagctc tcaggagacc tcacctagat gcctattcaa gctttggaca gccatcagat 180
tgtcagccaa gagcctttta tttgaaagct cattcttccc cagacttgga ctctgggtca 240
gaggaagatg ggaaagaaag gacagatttt caggaagaaa atcacatttg tacctttaaa 300
cagactttag aaaactacag gactccaaat tttcagtctt atgacttgga cacatagact 360
gaatgagacc aaaggaaaag cttaacatac tacctcaagg tgaactttta tttaaaagag 420
agagaatctt atgtttttta aatggagtta tgaattttaa 460

<210> 206
<211> 481
<212> DNA
<213> Homo sapiens

<400> 206
tgtggtggaa ttcgggacgc ccccagaccc tgacttttтc ctgcgtgggc cgtctcctcc 60
tgcggaagca gtgacctctg acccctggtg accttcgctt tgagtgcctt ttgaacgctg 120
gtcccgcggg acttggtttt ctcaagctct gtctgtccaa agacgctccg gtcgaggtcc 180
cgcctgccct gggtggatac ttgaacccca gacgcccctc tgtgctgctg tgtccggagg 240

cggccttccc atctgcctgc ccacccggag ctctttccgc cggcgcaggg tcccaagccc 300
acctcccgcc ctcagtcctg cggtgtgcgt ctgggcacgt cctgcacaca caatgcaagt 360
cctggcctcc gcgcccgccc gcccacgcga gccgtacccg ccgccaactc tgttatttat 420
ggtgtgaccc cctggaggtg ccctcggccc accggggcta tttattgttt aatttatttg 480
t 481

<210> 207
<211> 605
<212> DNA
<213> Homo sapiens

<400> 207
acccttttg gattcagggc tcctcacaat taaaatgagt gtaatgaaac aaggtgaaaa 60
tatagaagca tccctttgta tactgttttg ctacttacag tgtacttggc attgctttat 120
ctcactggat tctcacggta ggatttctga gatcttaatc taagctccaa agttgtctac 180
ttttttgatc ctagggtgct ccttttgttt tacagagcag ggtcacttga tttgctagct 240
ggtggcagaa ttggcaccat tacccaggtc tgactgacca ccagtcagag gcactttatt 300
tgtatcatga aatgatttga aatcattgta aagcagcgaa gtctgataat gaatgccagc 360
tttccttgtg ctttgataac aaagactcca aatattctgg agaacctgga taaaagtttg 420
aagggctaga ttgggatttg aagacaaaat tgtaggaaat cttacatttt tgcaataaca 480
aacattaatg aaagcaaaac attataaaag taattttaat tcaccacata cttatcaatt 540
tcttgatgct tccaaatgac atctaccaga tatggttttg tggacatctt tttctgttta 600
cataa 605

<210> 208
<211> 655
<212> DNA
<213> Homo sapiens

<400> 208
ggcgttgttc tggattcccg tcgtaactta aagggaaact ttcacaatgt ccggagccct 60
tgatgtcctg caaatgaagg aggaggatgt ccttaagttc cttgcagcag gaacccactt 120
aggtggcacc aatcttgact tccagatgga acagtacatc tataaaagga aaagtgatgg 180
catctatatc ataaatctca agaggacctg ggagaagctt ctgctggcag ctcgtgcaat 240
tgttgccatt gaaaaccctg ctgatgtcag tgttatatcc tccaggaata ctggccagag 300
ggctgtgctg aagtttgctg ctgccactgg agccactcca attgctggcc gcttcactcc 360
tggaaccttc actaaccaga tccaggcagc cttccgggag ccacggcttc ttgtggttac 420
tgaccccagg gctgaccacc agcctctcac ggaggcatct tatgttaacc tacctaccat 480
tgcgctgtgt aacacagatt ctcctctgcg ctatgtggac attgccatcc catgcaacaa 540
caagggagct cactcagtgg gtttgatgtg gtggatgctg gctcgggaag ttctgcgcat 600
gcgtggcacc atttcccgtg aacacccatg ggaggtcatg cctgatctgt acttc 655

<210> 209
<211> 621
<212> DNA
<213> Homo sapiens

<400> 209
catttagaac atggttatca tccaagacta ctctaccctg caacattgaa ctcccaagag 60
caaatccaca ttcctcttga gttctgcagc ttctgtgtaa atagggcagc tgtcgtctat 120
gccgtagaat cacatgatct gaggaccatt catggaagct gctaaatagc ctagtctggg 180
gagtcttcca taaagttttg catggagcaa acaaacagga ttaaactagg tttggttcct 240
tcagccctct aaaagcatag ggcttagcct gcaggcttcc ttgggctttc tctgtgtgtg 300
tagttttgta aacactatag catctgttaa gatccagtgt ccatggaaac cttcccacat 360

gccgtgactc tggactatat cagtttttgg aaagcagggt tcctctgcct gctaacaagc 420
ccacgtggac cagtctgaat gtctttcctt tacacctatg tttttaaata gtcaaacttc 480
aagaaacaat ctaaacaagt ttctgttgca tatgtgtttg tgaacttgta tttgtattta 540
gtaggcttct atattgcatt taacttgttt ttgtaactcc tgattcttcc ttttcggata 600
ctattgatga ataaagaaat t 621

<210> 210
<211> 533
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 20, 21, 61
<223> n = A,T,C or G

<400> 210
cgccttgggg agccggcggn ngagtccggg acgtggagac ccggggtccc ggcagccggg 60
nggcccgcgg gcccagggtg gggatgcacc gccgcggggt gggagctggc gccatcgcca 120
agaagaaact tgcagaggcc aagtataagg agcgagggac ggtcttggct gaggaccagc 180
tagcccagat gtcaaagcag ttggacatgt tcaagaccaa cctggaggaa tttgccagca 240
aacacaagca ggagatccgg aagaatcctg agttccgtgt gcagttccag gacatgtgtg 300
caaccattgg cgtggatccg ctggcctctg gaaaaggatt ttggtctgag atgctgggcg 360
tgggggactt ctattacgaa ctaggtgtcc aaattatcga agtgtgcctg gcgctgaagc 420
atcggaatgg aggtctgata actttggagg aactacatca acaggtgttg aagggaaggg 480
gcaagttcgc ccaggatgtc agtcaagatg acctgatcag agccatcaag aaa 533

<210> 211
<211> 451
<212> DNA
<213> Homo sapiens

<400> 211
ttagcttgag ccgagaacga ggcgagaaag ctggagaccg aggagaccgc ctagagcgga 60
gtgaacgggg aggggaccgt ggggaccggc ttgatcgtgc gcggacacct gctaccaagc 120
ggagcttcag caaggaagtg gaggagcgga gtagagaacg gccctcccag cctgaggggc 180
tgcgcaaggc agctagcctc acggaggatc gggaccgtgg gcgggatgcc gtgaagcgag 240
aagctgccct acccccagtg agccccctga aggcggctct ctctgaggag gagttagaga 300
agaaatccaa ggctatcatt gaggaatatc tccatctcaa tgacatgaaa gaggcagtcc 360
agtgcgtgca ggagctggcc tcaccctcct tgctcttcat ctttgtacgg catggtgtcg 420
agtctacgct ggagcgcagt gccattgctc g 451

<210> 212
<211> 471
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 54
<223> n = A,T,C or G

<400> 212
gtgattattc ttgatcaggg agaagatcat ttagatttgt tttgcattcc ttanaatgga 60

gggcaacatt ccacagctgc cctggctgtg atgagtgtcc ttgcaggggc cggagtagga 120
gcactggggt gggggcggaa ttggggttac tcgatgtaag ggattccttg ttgttgtgtt 180
gagatccagt gcagttgtga tttctgtgga tcccagcttg gttccaggaa ttttgtgtga 240
ttggcttaaa tccagttttc aatcttcgac agctgggctg gaacgtgaac tcagtagctg 300
aacctgtctg acccggtcac gttcttggat cctcagaact ctttgctctt gtcggggtgg 360
gggtgggaac tcacgtgggg agcggtggct gagaaaatgt aaggattctg gaatacatat 420
tccatgggac tttccttccc tctcctgctt cctcttttcc tgctccctaa c 471

<210> 213
<211> 511
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 27, 63, 337, 442
<223> n = A,T,C or G

<400> 213
ctaattagaa acttgctgta ctttttnttt tcttttaggg gtcaaggacc ctctttatag 60
ctnccatttg cctacaataa attattgcag cagtttgcaa tactaaaata ttttttatag 120
actttatatt tttccttttg ataaagggat gctgcatagt agagttggtg taattaaact 180
atctcagccg tttccctgct ttcccttctg ctccatatgc ctcattgtcc ttccagggag 240
ctcttttaat cttaaagttc tacatttcat gctcttagtc aaattctgtt acctttttaa 300
taactcttcc cactgcatat ttccatcttg aattggnggt tctaaattct gaaactgtag 360
ttgagataca gctatttaat atttctggga gatgtgcatc cctcttcttt gtggttgccc 420
aaggttgttt tgcgtaactg anactccttg atatgcttca gagaatttag gcaaacactg 480
gccatggccg tgggagtact gggagtaaaa t 511

<210> 214
<211> 521
<212> DNA
<213> Homo sapiens

<400> 214
agcattgcca aataatccct aattttccac taaaaatata atgaaatgat gttaagcttt 60
ttgaaaagtt taggttaaac ctactgttgt tagattaatg tatttgttgc ttccctttat 120
ctggaatgtg gcattagctt ttttatttta accctcttta attcttattc aattccatga 180
cttaaggttg gagagctaaa cactgggatt tttggataac agactgacag ttttgcataa 240
ttataatcgg cattgtacat agaaaggata tggctacctt ttgttaaatc tgcactttct 300
aaatatcaaa aaagggaaat gaagtataaa tcaatttttg tataatctgt ttgaaacatg 360
agttttattt gcttaatatt agggctttgc ccctttttctg taagtctctt gggatcctgt 420
gtagaagctg ttctcattaa acaccaaaca gttaagtcca ttctctggta ctagctacaa 480
attcggtttc atattctact taacaattta aataaactga a 521

<210> 215
<211> 381
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 17, 20, 60, 61, 365
<223> n = A,T,C or G

<400> 215
gagcggagag cggaccngtn agagccctga gcagccccac cgccgccgcc ggcctagttn 60
ncatcacacc ccgggaggag ccgcagctgc cgcagccggc cccagtcacc atcaccgcaa 120
ccatgagcag cgaggccgag acccagcagc cgcccgccgc ccccccccgcc gcccccgccc 180
tcagcgccgc cgacaccaag cccggcacta cgggcagcgg cgcagggagc ggtggcccgg 240
gcggcctcac atcggcggcg cctgccggcg gggacaagaa ggtcatcgca acgaaggttt 300
tgggaacagt aaaatggttc aatgtaagga acggatatgg tttcatcaac aggaatgaca 360
ccaangaaga tgtatttgta c 381

<210> 216
<211> 425
<212> DNA
<213> Homo sapiens

<400> 216
ttactaacta ggtcattcaa ggaagtcaag ttaacttaaa catgtcacct aaatgcactt 60
gatggtgttg aaatgtccac cttcttaaat ttttaagatg aacttagttc taaagaagat 120
aacaggccaa tcctgaaggt actccctgtt tgctgcagaa tgtcagatat tttggatgtt 180
gcataagagt cctatttgcc ccagttaatt caacttttgt ctgcctgttt tgtggactgg 240
ctggctctgt tagaactctg tccaaaaagt gcatggaata taacttgtaa agcttcccac 300
aattgacaat atatatgcat gtgtttaaac caaatccaga aagcttaaac aatagagctg 360
cataatagta tttattaaag aatcacaact gtaaacatga gaataactta aggattctag 420
tttag 425

<210> 217
<211> 181
<212> DNA
<213> Homo sapiens

<400> 217
gagaaaccaa atgataggtt gtagagcctg atgactccaa acaaagccat cacccgcatt 60
cttcctcctt cttctggtgc tacagctcca agggcccttc accttcatgt ctgaaatgga 120
actttggctt tttcagtgga agaatatgtt gaaggtttca ttttgttcta gaaaaaaaaa 180
a 181

<210> 218
<211> 405
<212> DNA
<213> Homo sapiens

<400> 218
caggccttcc agttcactga caaacatggg gaagtgtgcc cagctggctg gaaacctggc 60
agtgatacca tcaagcctga tgtccaaaag agcaaagaat atttctccaa gcagaagtga 120
gcgctgggct gttttagtgc caggctgcgg tgggcagcca tgagaacaaa acctcttctg 180
tatttttttt ttccattagt aaaacacaag acttcagatt cagccgaatt gtggtgtctt 240
acaaggcagg cctttcctac agggggtgga gagaccagcc tttcttcctt tggtaggaat 300
ggcctgagtt ggcgttgtgg gcaggctact ggtttgtatg atgtattagt agagcaaccc 360
attaatcttt tgtagtttgt attaaacttg aactgagaaa aaaaa 405

<210> 219
<211> 216
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 207, 210
<223> n = A,T,C or G

<400> 219
actccaagag ttagggcagc agagtggagc gatttagaaa gaacatttta aaacaatcag 60
ttaatttacc atgtaaaatt gctgtaaatg ataatgtgta cagattttct gttcaaatat 120
tcaattgtaa acttcttgtt aagactgtta cgtttctatt gcttttgtat gggatattgc 180
aaaaataaaa aggaaagaac cctcttnaan aaaaaa 216

<210> 220
<211> 380
<212> DNA
<213> Homo sapiens

<400> 220
cttacaaatt gcccccatgt gtaggggaca cagaaccctt tgagaaaact tagatttttg 60
tctgtacaaa gtctttgcct ttttccttct tcatttttt ccagtacatt aaatttgtca 120
atttcatctt tgagggaaac tgattagatg ggttgtgttt gtgttctgat ggagaaaaca 180
gcaccccaag gactcagaag atgattttaa cagttcagaa cagatgtgtg caatattggt 240
gcatgtaata atgttgagtg gcagtcaaaa gtcatgattt ttatcttagt tcttcattac 300
tgcattgaaa aggaaaacct gtctgagaaa atgcctgaca gtttaattta aaactatggt 360
gtaagtcttt gacaaaaaaa 380

<210> 221
<211> 398
<212> DNA
<213> Homo sapiens

<400> 221
ggttagtaag ctgtcgactt tgtaaaaaag ttaaaaatga aaaaaaaagg aaaaatgaat 60
tgtatattta atgaatgaac atgtacaatt tgccactggg aggaggttcc tttttgttgg 120
gtgagtctgc aagtgaattt cactgatgtt gatattcatt gtgtgtagtt ttatttcggt 180
cccagccccg tttcctttta ttttggagct aatgccagct gcgtgtctag ttttgagtgc 240
agtaaaatag aatcagcaaa tcactcttat ttttcatcct tttccggtat tttttgggtt 300
gtttctgtgg gagcagtgta caccaactct tcctgtatat tgccttttg ctggaaaatg 360
ttgtatgttg aataaaattt tctataaaaa ttaaaaaa 398

<210> 222
<211> 301
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 49, 64
<223> n = A,T,C or G

<400> 222
ttcgataatt gatctcatgg gctttccctg gaggaaaggt ttttttgnt gtttatttt 60
taanaacttg aaacttgtaa actgagatgt ctgtagcttt tttgcccatc tgtagtgtat 120
gtgaagattt caaaacctga gagcactttt tctttgttta gaattatgag aaaggcacta 180

gatgacttta ggatttgcat ttttcccttt attgcctcat ttcttgtgac gccttgttgg 240
ggagggaaat ctgtttattt tttcctacaa ataaaaagct aagattctat atcgcaaaaa 300
a 301

<210> 223
<211> 200
<212> DNA
<213> Homo sapiens

<400> 223
gtaagtgctt aggaagaaac tttgcaaaca tttaatgagg atacactgtt catttttaaa 60
attccttcac actgtaattt aatgtgtttt atattctttt gtagtaaaac aacataactc 120
agatttctac aggagacagt ggttttattt ggattgtctt ctgtaatagg tttcaataaa 180
gctggatgaa cttaaaaaaa 200

<210> 224
<211> 385
<212> DNA
<213> Homo sapiens

<400> 224
gaaaggtttg atccggactc aaagaaagca aaggagtgtg agccgccatc tgctggagca 60
gctgtaactg caagacctgg acaagagatt cgtcagcgaa ctgcagctca aagaaacctt 120
tctccaacac cagcaagccc taaccagggc cctcctccac aagttccagt atctcctgga 180
ccaccaaagg acagttctgc ccctggtgga cccccagaaa ggactgttac tccagcccta 240
tcatcaaatg tgttaccaag acatcttgga tcccctgcta cttcagtgcc tggaatgggt 300
aaacagagca cttaatgtta tttacagttt atattgtttt ctctggttac caataaaacg 360
ggccatttc aggtggtaaa aaaaa 385

<210> 225
<211> 560
<212> PRT
<213> Homo sapiens

<400> 225
Met Glu Cys Leu Tyr Tyr Phe Leu Gly Phe Leu Leu Leu Ala Ala Arg
1 5 10 15
Leu Pro Leu Asp Ala Ala Lys Arg Phe His Asp Val Leu Gly Asn Glu
20 25 30
Arg Pro Ser Ala Tyr Met Arg Glu His Asn Gln Leu Asn Gly Trp Ser
35 40 45
Ser Asp Glu Asn Asp Trp Asn Glu Lys Leu Tyr Pro Val Trp Lys Arg
50 55 60
Gly Asp Met Arg Trp Lys Asn Ser Trp Lys Gly Gly Arg Val Gln Ala
65 70 75 80
Val Leu Thr Ser Asp Ser Pro Ala Leu Val Gly Ser Asn Ile Thr Phe
85 90 95
Ala Val Asn Leu Ile Phe Pro Arg Cys Gln Lys Glu Asp Ala Asn Gly
100 105 110
Asn Ile Val Tyr Glu Lys Asn Cys Arg Asn Glu Ala Gly Leu Ser Ala
115 120 125
Asp Pro Tyr Val Tyr Asn Trp Thr Ala Trp Ser Glu Asp Ser Asp Gly
130 135 140
Glu Asn Gly Thr Gly Gln Ser His His Asn Val Phe Pro Asp Gly Lys

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145                 150                 155                 160
Pro Phe Pro His His Pro Gly Trp Arg Arg Trp Asn Phe Ile Tyr Val
                165                 170                 175
Phe His Thr Leu Gly Gln Tyr Phe Gln Lys Leu Gly Arg Cys Ser Val
            180                 185                 190
Arg Val Ser Val Asn Thr Ala Asn Val Thr Leu Gly Pro Gln Leu Met
        195                 200                 205
Glu Val Thr Val Tyr Arg Arg His Gly Arg Ala Tyr Val Pro Ile Ala
    210                 215                 220
Gln Val Lys Asp Val Tyr Val Val Thr Asp Gln Ile Pro Val Phe Val
225                 230                 235                 240
Thr Met Phe Gln Lys Asn Asp Arg Asn Ser Ser Asp Glu Thr Phe Leu
                245                 250                 255
Lys Asp Leu Pro Ile Met Phe Asp Val Leu Ile His Asp Pro Ser His
            260                 265                 270
Phe Leu Asn Tyr Ser Thr Ile Asn Tyr Lys Trp Ser Phe Gly Asp Asn
        275                 280                 285
Thr Gly Leu Phe Val Ser Thr Asn His Thr Val Asn His Thr Tyr Val
    290                 295                 300
Leu Asn Gly Thr Phe Ser Leu Asn Leu Thr Val Lys Ala Ala Ala Pro
305                 310                 315                 320
Gly Pro Cys Pro Pro Pro Pro Pro Pro Pro Arg Pro Ser Lys Pro Thr
                325                 330                 335
Pro Ser Leu Gly Pro Ala Gly Asp Asn Pro Leu Glu Leu Ser Arg Ile
            340                 345                 350
Pro Asp Glu Asn Cys Gln Ile Asn Arg Tyr Gly His Phe Gln Ala Thr
        355                 360                 365
Ile Thr Ile Val Glu Gly Ile Leu Glu Val Asn Ile Ile Gln Met Thr
    370                 375                 380
Asp Val Leu Met Pro Val Pro Trp Pro Glu Ser Ser Leu Ile Asp Phe
385                 390                 395                 400
Val Val Thr Cys Gln Gly Ser Ile Pro Thr Glu Val Cys Thr Ile Ile
                405                 410                 415
Ser Asp Pro Thr Cys Glu Ile Thr Gln Asn Thr Val Cys Ser Pro Val
            420                 425                 430
Asp Val Asp Glu Met Cys Leu Leu Thr Val Arg Arg Thr Phe Asn Gly
        435                 440                 445
Ser Gly Thr Tyr Cys Val Asn Leu Thr Leu Gly Asp Asp Thr Ser Leu
    450                 455                 460
Ala Leu Thr Ser Thr Leu Ile Ser Val Pro Asp Arg Asp Pro Ala Ser
465                 470                 475                 480
Pro Leu Arg Met Ala Asn Ser Ala Leu Ile Ser Val Gly Cys Leu Ala
                485                 490                 495
Ile Phe Val Thr Val Ile Ser Leu Leu Val Tyr Lys Lys His Lys Glu
            500                 505                 510
Tyr Asn Pro Ile Glu Asn Ser Pro Gly Asn Val Val Arg Ser Lys Gly
        515                 520                 525
Leu Ser Val Phe Leu Asn Arg Ala Lys Ala Val Phe Phe Pro Gly Asn
    530                 535                 540
Gln Glu Lys Asp Pro Leu Leu Lys Asn Gln Glu Phe Lys Gly Val Ser
545                 550                 555                 560
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<210> 226

<211> 9
<212> PRT
<213> Homo sapiens

<400> 226
Ile Leu Ile Pro Ala Thr Trp Lys Ala
 1   5

<210> 227
<211> 9
<212> PRT
<213> Homo sapiens

<400> 227
Phe Leu Leu Asn Asp Asn Leu Thr Ala
 1   5

<210> 228
<211> 9
<212> PRT
<213> Homo sapiens

<400> 228
Leu Leu Gly Asn Cys Leu Pro Thr Val
 1   5

<210> 229
<211> 10
<212> PRT
<213> Homo sapiens

<400> 229
Lys Leu Leu Gly Asn Cys Leu Pro Thr Val
 1   5   10

<210> 230
<211> 10
<212> PRT
<213> Homo sapiens

<400> 230
Arg Leu Thr Gly Gly Leu Lys Phe Phe Val
 1   5   10

<210> 231
<211> 9
<212> PRT
<213> Homo sapiens

<400> 231
Ser Leu Gln Ala Leu Lys Val Thr Val
 1   5

<210> 232
<211> 20
<212> PRT
<213> Homo sapiens

<400> 232
Ala Gly Ala Asp Val Ile Lys Asn Asp Gly Ile Tyr Ser Arg Tyr Phe
 1   5   10   15
Phe Ser Phe Ala
            20

<210> 233
<211> 21
<212> PRT
<213> Homo sapiens

<400> 233
Phe Phe Ser Phe Ala Ala Asn Gly Arg Tyr Ser Leu Lys Val His Val
 1   5   10   15
Asn His Ser Pro Ser
            20

<210> 234
<211> 20
<212> PRT
<213> Homo sapiens

<400> 234
Phe Leu Val Thr Trp Gln Ala Ser Gly Pro Pro Glu Ile Ile Leu Phe
 1   5   10   15
Asp Pro Asp Gly
            20

<210> 235
<211> 20
<212> PRT
<213> Homo sapiens

<400> 235
Leu Gln Ser Ala Val Ser Asn Ile Ala Gln Ala Pro Leu Phe Ile Pro
 1   5   10   15
Pro Asn Ser Asp
            20

<210> 236

<211> 20
<212> PRT
<213> Homo sapiens

<400> 236
Ile Gln Asp Asp Phe Asn Asn Ala Ile Leu Val Asn Thr Ser Lys Arg
 1   5   10   15
Asn Pro Gln Gln
            20

<210> 237
<211> 21
<212> PRT
<213> Homo sapiens

<400> 237
Arg Asn Ser Leu Gln Ser Ala Val Ser Asn Ile Ala Gln Ala Pro Leu
 1   5   10   15
Phe Ile Pro Pro Asn
            20

<210> 238
<211> 20
<212> PRT
<213> Homo sapiens

<400> 238
Thr His Glu Ser His Arg Ile Tyr Val Ala Ile Arg Ala Met Asp Arg
 1   5   10   15
Asn Ser Leu Gln
            20

<210> 239
<211> 20
<212> PRT
<213> Homo sapiens

<400> 239
Arg Asn Pro Gln Gln Ala Gly Ile Arg Glu Ile Phe Thr Phe Ser Pro
 1   5   10   15
Gln Ile Ser Thr
            20

<210> 240
<211> 21
<212> PRT
<213> Homo sapiens

<400> 240
Gly Gln Ala Thr Ser Tyr Glu Ile Arg Met Ser Lys Ser Leu Gln Asn

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 1               5                   10                  15
Ile Gln Asp Asp Phe
            20


<210> 241
<211> 20
<212> PRT
<213> Homo sapiens

<400> 241
Glu Arg Lys Trp Gly Phe Ser Arg Val Ser Ser Gly Gly Ser Phe Ser
 1               5                   10                  15
Val Leu Gly Val
            20


<210> 242
<211> 20
<212> PRT
<213> Homo sapiens

<400> 242
Gly Ser His Ala Met Tyr Val Pro Gly Tyr Thr Ala Asn Gly Asn Ile
 1               5                   10                  15
Gln Met Asn Ala
            20


<210> 243
<211> 20
<212> PRT
<213> Homo sapiens

<400> 243
Val Asn His Ser Pro Ser Ile Ser Thr Pro Ala His Ser Ile Pro Gly
 1               5                   10                  15
Ser His Ala Met
            20


<210> 244
<211> 20
<212> PRT
<213> Homo sapiens

<400> 244
Ala Val Pro Pro Ala Thr Val Glu Ala Phe Val Glu Arg Asp Ser Leu
 1               5                   10                  15
His Phe Pro His
            20


<210> 245
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<211> 20
<212> PRT
<213> Homo sapiens

<400> 245
Lys Pro Gly His Trp Thr Tyr Thr Leu Asn Asn Thr His His Ser Leu
 1   5   10   15
Gln Ala Leu Lys
            20

<210> 246
<211> 20
<212> PRT
<213> Homo sapiens

<400> 246
Asn Leu Thr Phe Arg Thr Ala Ser Leu Trp Ile Pro Gly Thr Ala Lys
 1   5   10   15
Pro Gly His Trp
            20

<210> 247
<211> 20
<212> PRT
<213> Homo sapiens

<400> 247
Leu His Phe Pro His Pro Val Met Ile Tyr Ala Asn Val Lys Gln Gly
 1   5   10   15
Phe Tyr Pro Ile
            20

<210> 248
<211> 20
<212> PRT
<213> Homo sapiens

<400> 248
Pro Glu Thr Gly Asp Pro Val Thr Leu Arg Leu Leu Asp Asp Gly Ala
 1   5   10   15
Gly Ala Asp Val
            20

<210> 249
<211> 20
<212> PRT
<213> Homo sapiens

<400> 249
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<210> 250
<211> 20
<212> PRT
<213> Homo sapiens

<400> 250
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Leu Thr Phe Arg
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<210> 251
<211> 20
<212> PRT
<213> Homo sapiens

<400> 251
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Val Pro Pro Ala
            20


<210> 252
<211> 153
<212> PRT
<213> Homo sapiens

<400> 252
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        35                  40                  45
Ala Ala Val Ser Ser Ile Phe Asn Ser Pro Glu Glu Phe Leu Gly Lys
    50                  55                  60
Ala Val Gly Leu Ser Ala Glu Ala Leu Thr Ile Gln Gln Tyr Ala Asp
65                  70                  75                  80
Val Leu Ser Lys Ala Leu Gly Lys Glu Val Arg Asp Ala Lys Ile Thr
                85                  90                  95
Pro Glu Ala Phe Glu Lys Leu Gly Phe Pro Ala Ala Lys Glu Ile Ala
            100                 105                 110
Asn Met Cys Arg Phe Tyr Glu Met Lys Pro Asp Arg Asp Val Asn Leu
        115                 120                 125
Thr His Gln Leu Asn Pro Lys Val Lys Ser Phe Ser Gln Phe Ile Ser
    130                 135                 140
Glu Asn Gln Gly Ala Phe Lys Gly Met
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145 150

<210> 253
<211> 462
<212> DNA
<213> Homo sapiens

<400> 253
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<210> 254
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<212> DNA
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<400> 254
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<210> 255

<211> 401
<212> DNA
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<220>
<221> misc_feature
<222> 9, 67, 247, 275, 277, 397
<223> n = A,T,C or G

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actctangga cctgtgttat atttgaagaa aatgntnaac atgctgatac agaaggcaat 300
aataaaacag tgctaaaata taaatgccat acaatgaaga agctcagcat gacaagaact 360
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<210> 256
<211> 401
<212> DNA
<213> Homo sapiens

<220>
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<222> 7, 37, 51, 79, 96, 98, 103, 104, 107, 116, 167, 181, 183,
194, 206, 276, 303, 307, 308, 310, 323, 332, 341, 353, 374,
376
<223> n = A,T,C or G

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<210> 257
<211> 401
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 382, 387
<223> n = A,T,C or G

<400> 257
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ttaaaatatc tgctaagtaa tttgctatgt cttctcccac actatcaata tgcctgcttc 180
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gcctgttcag agtgtctaca gtaagagctg gacaaactct ggagggacac agtctttgag 300
acagctcttt tggttgcttt ccacttttct gaaaggttca cagtaacctt ctagataata 360
gaaactccca gttaaagcct angctancaa ttttttttag t 401

<210> 258
<211> 401
<212> DNA
<213> Homo sapiens

<400> 258
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tctgtggagg agcagcagta gtcggagggt gcaggatatt agaaatggct actccccagt 180
caattttcat ctttgcaatc tgcattttaa tgataacaga attaattctg gcctcaaaaa 240
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<210> 259
<211> 401
<212> DNA
<213> Homo sapiens

<400> 259
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acagctcagg ctcacagaag ggcagaaact ttgattttca gccgccatgc tgtgattgcc 180
gtccgaaatg gcaagctgtg cttcatgttc cgagtgggtg acctgaggaa aagcatgatc 240
attagtgcct ctgtgcgcat ccaggtggtc aagaaaacaa ctacacctga aggggaggtg 300
gttcctattc accaactgga cattcctgtt gataacccaa tcgagagcaa taacattttt 360
ctggtggccc ctttgatcat ctgccacgtg attgacaagc g 401

<210> 260
<211> 363
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 7, 9, 19, 41, 63, 73, 106, 111, 113, 116, 119, 156, 158,
162, 187, 247, 288, 289, 290, 292, 298, 299, 300, 340
<223> n = A,T,C or G

<400> 260
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cgctggnctg ttgaaaccca ctccatggct tcctgccact gcagttgggc ccagggctgg 240
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aca 363

<210> 261
<211> 401

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 114, 152
<223> n = A,T,C or G

<400> 261
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<210> 262
<211> 401
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 7, 26, 258, 305, 358, 373, 374, 378
<223> n = A,T,C or G

<400> 262
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<210> 263
<211> 401
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 232, 290, 304, 326, 383
<223> n = A,T,C or G

<400> 263
ctgtccgacc aagagaggcc ggccgagccc gaggcttggg cttttgcttt ctggcggagg 60
gatctgcggc ggtttaggag gcggcgctga tcctgggagg aagaggcagc tacggcggcg 120
gcggcggtgg cggctagggc ggcggcgaat aaaggggccg ccgccgggtg atgcggtgac 180
cactgcggca ggcccaggag ctgagtgggc cccggccctc agcccgtccc gncggacccg 240
ctttcctcaa ctctccatct tctcctgccg accgagatcg ccgaggcggn ctcaggctcc 300
ctanccccct ccccgtccct tccccncccc cgtccccgcc ccgggggccg ccgccacccg 360
cctcccacca tggctctgaa ganaatccac aaggaattga a 401

<210> 264
<211> 401
<212> DNA
<213> Homo sapiens

<400> 264
aacaccagcc actccaggac ccctgaaggc ctctaccagg tcaccagtgt tctgcgccta 60
aagccacccc ctggcagaaa cttcagctgt gtgttctgga atactcacgt gagggaactt 120
actttggcca gcattgacct tcaaagtcag atggaaccca ggacccatcc aacttggctg 180
cttcacattt tcatcccctc ctgcatcatt gctttcattt tcatagccac agtgatagcc 240
ctaagaaaac aactctgtca aaagctgtat tcttcaaaag acacaacaaa aagacctgtc 300
accacaacaa agagggaagt gaacagtgct gtgaatctga acctgtggtc ttgggagcca 360
gggtgacctg atatgacatc taaagaagct tctggactct g 401

<210> 265
<211> 271
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 59
<223> n = A,T,C or G

<400> 265
gccacttcct gtggacatgg gcagagcgct gctgccagtt cctggtagcc ttgaccacna 60
cgctgggggg tctttgtgat ggtcatgggt ctcatttgca cttgggggtg tgggattcaa 120
gttagaagtt tctagatctg gccgggcgca gtggctcaca cctgtaatcc cagcacttta 180
ggaggctgag gcaggcggat catgaggtca ggagatcgag accgtcctgg ctaacacagt 240
gaaaccccgt ctctactaaa aatacaaaaa a 271

<210> 266
<211> 401
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 45
<223> n = A,T,C or G

<400> 266
attcataaat ttagctgaaa gatactgatt caatttgtat acagngaata taaatgagac 60
gacagcaaaa ttttcatgaa atgtaaaata tttttatagt ttgttcatac tatatgaggt 120
tctattttaa atgactttct ggattttaaa aaatttcttt aaatacaatc atttttgtaa 180
tatttatttt atgcttatga tctagataat tgcagaatat cattttatct gactctgtct 240
tcataagaga gctgtggccg aattttgaac atctgttata gggagtgatc aaattagaag 300
gcaatgtgga aaaacaattc tgggaaagat ttctttatat gaagtccctg ccactagcca 360
gccatcctaa ttgatgaaag ttatctgttc acaggcctgc a 401

<210> 267
<211> 401
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 116, 247, 277, 296, 307, 313, 322, 323, 336, 342, 355, 365,
377, 378, 397
<223> n = A,T,C or G

<400> 267
gaagaggcat cacctgatcc cggagacctt tggagttaag aggcggcgga agcgagggcc 60
tgtggagtcg gatcctcttc ggggtgagcc agggtcggcg cgcgcggctg tctcanaact 120
catgcagctg ttcccgcgag gcctgtttga ggacgcgctg ccgcccatcg tgctgaggag 180
ccaggtgtac agccttgtgc ctgacaggac cgtggccgac cggcagctga aggagcttca 240
agagcanggg gagacaaaat cgtccagctg ggcttcnact tggatgccca tggaanttat 300
tctttcnctt ganggactta cnngggaccc aagaancccc tncaaggggc ccttngtgga 360
tgggncccga aaccccnnta tttgcccttg ggggggncca a 401

<210> 268
<211> 223
<212> DNA
<213> Homo sapiens

<400> 268
tcgccatgtt ggccaggctg gtcttgaact cctgacttta agtgatccac ccgcctcaac 60
ctcccaaagt gctgggatta caggtgtgag ccaccgcgcc tggcctgata catactttta 120
gaatcaagta gtcacgcact ttttctgttc atttttctaa aaagtaaata tacaaatgtt 180
ttgtttttttg ttttttttgt ttgtttgttt ctgttttttt ttt 223

<210> 269
<211> 401
<212> DNA
<213> Homo sapiens

<400> 269
actatgtaaa ccacattgta ctttttttta ctttggcaac aaatatttat acatacaaga 60
tgctagttca tttgaatatt tctcccaact tatccaagga tctccagctc taacaaaatg 120
gtttatttttt atttaaatgt caatagttgt tttttaaaat ccaaatcaga ggtgcaggcc 180
accagttaaa tgccgtctat caggttttgt gccttaagag actacagagt caaagctcat 240
ttttaaagga gtaggacaaa gttgtcacag gtttttgttg ttgtttttat tgcccccaaa 300
attacatgtt aatttccatt tatatcaggg attctattta cttgaagact gtgaagttgc 360
cattttgtct cattgttttc tttgacataa ctaggatcca t 401

<210> 270
<211> 401
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 240, 382
<223> n = A,T,C or G

<400> 270
tggctgttga ttcacctcag cactgcttgg tatctgcacc ctacctctct ttagaggctg 60

ccttgtcaac tgaaaaatgc acctgacttc gagcaagact ctttccttag gttctggatc 120
tgtttgagcc ccatggcact gagctggaat ctgagggtct tgttccaagg atgtgatgat 180
gtgggagaat gttctttgaa agagcagaaa tccagtctgc atggaaacag cctgtagagn 240
agaagtttcc agtgataagt gttcactgtt ctaaggaggt acaccacagc tacctgaatt 300
ttcccaaaat gagtgcttct gtgcgttaca actggccttt gtacttgact gtgatgactt 360
tgtttttttct tttcaattct anatgaacat gggaaaaaat g 401

<210> 271
<211> 329
<212> DNA
<213> Homo sapiens

<400> 271
ccacagcctc caagtcaggt ggggtggagt cccagagctg cacagggttt ggcccaagtt 60
tctaagggag gcacttcctc ccctcgccca tcagtgccag cccctgctgg ctggtgcctg 120
agcccctcag acagcccccct gccccgcagg cctgccttct cagggacttc tgcggggcct 180
gaggcaagcc atggagtgag acccaggagc cggacacttc tcaggaaatg gcttttccca 240
acccccagcc cccacccggt ggttcttcct gttctgtgac tgtgtatagt gccaccacag 300
cttatggcat ctcattgagg acaaaaaaa 329

<210> 272
<211> 401
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 7, 12, 21, 61, 62, 66, 72, 78, 88, 90, 92, 98, 117, 119,
128, 130, 134, 142, 144, 151, 159, 162, 164, 168, 169, 177,
184, 185, 188, 194, 202, 204, 209, 213, 218, 223, 231, 260,
272, 299, 300, 306, 321, 322, 323, 331, 335, 336, 338
<223> n = A,T,C or G

<221> misc_feature
<222> 341, 342, 343, 345, 346, 351, 358, 360, 362, 363, 387, 390,
392
<223> n = A,T,C or G

<400> 272
nggctgntaa cntcggaggt nacttcctgg actatcctgg agacccctc cgcttccacg 60
nncatnatat cnctcatngc tgggcccntn angacacnat cccactccaa cacctgngng 120
atgctggncn cctnggaacc ancntcagaa ngaccctgnt cntntgtnnt ccgcaanctg 180
aagnnaangc gggntacacc tncntgcant ggnccacnct gcngggaact ntacacacct 240
acgggatgtg gctgcgccan gagccaagag cntttctgga tgattcccca gcctcttgnn 300
agggantcta caacattgct nnntaccttt ntccnncngc nnntnntgga ntacaggngn 360
tnntaacact acatcttttt tactgcnccn tncttggtgg g 401

<210> 273
<211> 401
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature

<222> 399
<223> n = A,T,C or G

<400> 273
cagcaccatg aagatcaaga tcatcgcacc cccagagcgc aagtactcgg tgtggatcgg 60
tggctccatc ctggcctcac tgtccacctt ccagcagatg tggattagca agcaggagta 120
cgacgagtcg ggcccctcca tcgtccaccg caaatgcttc taaacggact cagcagatgc 180
gtagcatttg ctgcatgggt taattgagaa tagaaatttg cccctggcaa atgcacacac 240
ctcatgctag cctcacgaaa ctggaataag ccttcgaaaa gaaattgtcc ttgaagcttg 300
tatctgatat cagcactgga ttgtagaact tgttgctgat tttgaccttg tattgaagtt 360
aactgttccc cttggtatta acgtgtcagg gctgagtgnt c 401

<210> 274
<211> 401
<212> DNA
<213> Homo sapiens

<400> 274
ccacccacac ccaccgcgcc ctcgttcgcc tcttctccgg gagccagtcc gcgccaccgc 60
cgccgcccag gccatcgcca ccctccgcag ccatgtccac caggtccgtg tcctcgtcct 120
cctaccgcag gatgttcggc ggcccgggca ccgcgagccg gccgagctcc agccggagct 180
acgtgactac gtccacccgc acctacagcc tgggcagcgc gctgcgcccc agcaccagcc 240
gcagcctcta cgcctcgtcc ccgggcggcg tgtatgccac gcgctcctct gccgtgcgcc 300
tgcggagcag cgtgcccggg gtgcggctcc tgcaggactc ggtggacttc tcgctggccg 360
acgccatcaa caccgagttc aagaacaccc gcaccaacga g 401

<210> 275
<211> 401
<212> DNA
<213> Homo sapiens

<400> 275
ccacttccac cactttgtgg agcagtgcct tcagcgcaac ccggatgcca ggtatccctg 60
ctggcctggg cctgggcttc gggagagcag agggtgctca ggagggtaag gccagggtgt 120
gaagggactt acctcccaaa ggttctgcag gggaatctgg agctacacac aggagggatc 180
agctcctggg tgtgtcagag gccagcctgg ggagctctgg ccactgcttc ccatgagctg 240
agggagaggg agaggggacc cgaggctgag gcataagtgg caggatttcg ggaagctggg 300
gacacggcag tgatgctgcg gtctctcctc ccctttccct ccaggcccag tgccagcacc 360
ctcctgaacc actctttctt caagcagatc aagcgacgtg c 401

<210> 276
<211> 401
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 11
<223> n = A,T,C or G

<400> 276
tctgatattg ntacccttga gccacctaag ttagaagaaa ttggaaatca agaagttgtc 60
attgttgaag aagcacagag ttcagaagac tttaacatgg gctcttcctc tagcagccag 120
tatactttct gtcagccaga aactgtattt tcatctcagc ctagtgatga tgaatcaagt 180

agtgatgaaa ccagtaatca gcccagtcct gcctttagac gacgccgtgc taggaagaag 240
accgtttctg cttcagaatc tgaagaccgg ctagttggtg aacaagaaac tgaaccttct 300
aaggagttga gtaaacgtca gttcagtagt ggtctcaata agtgtgttat acttgctttg 360
gtgattgcaa tcagcatggg atttggccat ttctatggca c 401

<210> 277
<211> 401
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 227, 333
<223> n = A,T,C or G

<400> 277
aactttggca acatatctca gcaaaaacta cagctatgtt attcatgcca aaataaaagc 60
tgtgcagagg agtggctgca atgaggtcac aacggtggtg gatgtaaaag agatcttcaa 120
gtcctcatca cccatccctc gaactcaagt cccgctcatt acaaattctt cttgccagtg 180
tccacacatc ctgccccatc aagatgttct catcatgtgt tacgagnggc gctcaaggat 240
gatgcttctt gaaaattgct tagttgaaaa atggagagat cagcttagta aaagatccat 300
acagtgggaa gagaggctgc aggaacagcg ganaacagtt caggacaaga agaaaacagc 360
cgggcgcacc agtcgtagta atccccccaa accaaaggga a 401

<210> 278
<211> 401
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 322, 354
<223> n = A,T,C or G

<400> 278
aatgagtgtg agaccacaaa tgaatgccgg gaggatgaaa tgtgttggaa ttatcatggc 60
ggcttccgtt gttatccacg aaatccttgt caagatccct acattctaac accagagaac 120
cgatgtgttt gcccagtctc aaatgccatg tgccgagaac tgccccagtc aatagtctac 180
aaatacatga gcatccgatc tgataggtct gtgccatcag acatcttcca gatacaggcc 240
acaactattt atgccaacac catcaatact tttcggatta aatctggaaa tgaaaatgga 300
gagtctacct acgacaacaa anccctgtaa gtgcaatgct tgtgctcgtg aagncattat 360
caggaccaag agaacatatc gtggacctgg agatgctgac a 401

<210> 279
<211> 401
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 30, 35, 81, 88, 180, 212, 378, 384, 391
<223> n = A,T,C or G

<400> 279

aaattattgc ctctgataca tacctaagtn aacanaacat taatacctaa gtaaacataa 60
cattacttgg agggttgcag nttctaantg aaactgtatt tgaaactttt aagtatactt 120
taggaaacaa gcatgaacgg cagtctagaa taccagaaac atctacttgg gtagcttggn 180
gccattatcc tgtggaatct gatatgtctg gnagcatgtc attgatggga catgaagaca 240
tctttggaaa tgatgagatt atttcctgtg ttaaaaaaaa aaaaaatctt aaattcctac 300
aatgtgaaac tgaaactaat aattttgatc ctgatgtatg ggacagcgta tctgtaccag 360
gctctaaata acaaaagnta gggngacaag nacatgttcc t 401

<210> 280
<211> 326
<212> DNA
<213> Homo sapiens

<400> 280
gaagtggaat tgtataattc aattcgataa ttgatctcat gggctttccc tggaggaaag 60
gttttttttg ttgttttttt tttaagaact tgaaacttgt aaactgagat gtctgtagct 120
tttttgccca tctgtagtgt atgtgaagat ttcaaaacct gagagcactt tttctttgtt 180
tagaattatg agaaaggcac tagatgactt taggatttgc atttttccct ttattgcctc 240
atttcttgtg acgccttgtt ggggagggaa atctgtttat tttttcctac aaataaaaag 300
ctaagattct atatcgcaaa aaaaaa 326

<210> 281
<211> 374
<212> DNA
<213> Homo sapiens

<400> 281
caacgcgttt gcaaatattc ccctggtagc ctacttcctt acccccgaat attggtaaga 60
tcgagcaatg gcttcaggac atgggttctc ttctcctgtg atcattcaag tgctcactgc 120
atgaagactg gcttgtctca gtgtttcaac ctcaccaggg ctgtctcttg gtccacacct 180
cgctccctgt tagtgccgta tgacagcccc catcaaatga ccttggccaa gtcacggttt 240
ctctgtggtc aaggttggtt ggctgattgg tggaaagtag ggtggaccaa aggaggccac 300
gtgagcagtc agcaccagtt ctgcaccagc agcgcctccg tcctagtggg tgttcctgtt 360
tctcctggcc ctgg 374

<210> 282
<211> 404
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 26, 27, 51, 137, 180, 222
<223> n = A,T,C or G

<400> 282
agtgtggtgg aattcccgca tcctanncgc cgactcacac aaggcagagt ngccatggag 60
aaaattccag tgtcagcatt cttgctcctt gtggccctct cctacactct ggccagagat 120
accacagtca aacctgnagc caaaaaggac acaaaggact ctcgacccaa actgccccan 180
accctctcca gaggttgggg tgaccaactc atctggactc anacatatga agaagctcta 240
tataaatcca agacaagcaa caaacccttg atgattattc atcacttgga tgagtgccca 300
cacagtcaag ctttaaagaa agtgtttgct gaaaataaag aaatccagaa attggcagag 360
cagtttgtcc tcctcaatct ggtttatgaa acaactgaca aaca 404

<210> 283
<211> 184
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 26
<223> n = A,T,C or G

<400> 283
agtgtggtgg aattcacttg cttaanttgt gggcaaaaga gaaaaagaag gattgatcag 60
agcattgtgc aatacagttt cattaactcc ttccctcgct cccccaaaaa tttgaatttt 120
tttttcaaca ctcttacacc tgttatggaa aatgtcaacc tttgtaagaa aaccaaaata 180
aaaa 184

<210> 284
<211> 421
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 147, 149
<223> n = A,T,C or G

<400> 284
ctattaatcc tgccacaata tttttaatta cgtacaaaga tctgacatgt cacccaggga 60
cccatttcac ccactgctct gtttggccgc cagtcttttg tctctctctt cagcaatggt 120
gaggcggata ccctttcctc ggggaanana aatccatggt ttgttgccct tgccaataac 180
aaaaatgttg gaaagtcgag tggcaaagct gttgccattg gcatctttca cgtgaaccac 240
gtcaaaagat ccagggtgcc tctctctgtt ggtgatcaca ccaattcttc ctaggttagc 300
acctccagtc accatacaca ggttaccagt gtcgaacttg atgaaatcag taatcttgcc 360
agtctctaaa tcaatctgaa tggtatcatt caccttgatg aggggatcgg ggtagcggat 420
g 421

<210> 285
<211> 361
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 34, 188
<223> n = A,T,C or G

<400> 285
ctgggtggta actctttatt tcattgtccg gaanaaagat gggagtggga acagggtgga 60
cactgtgcag gcttcagctt ccactccggg caggattcag gctatctggg accgcaggga 120
ctgccaggtg cacagccctg gctcccgagg caggcaggca aggtgacggg actggaagcc 180
cttttcanag ccttggagga gctggtccgt ccacaagcaa tgagtgccac tctgcagttt 240
gcaggggatg gataaacagg gaaacactgt gcattcctca cagccaacag tgtaggtctt 300
ggtgaagccc cggcgctgag ctaagctcag gctgttccag ggagccacga aactgcaggt 360
a 361

<210> 286
<211> 336
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 40, 68, 75, 127, 262
<223> n = A,T,C or G

<400> 286
tttgagtggc agcgccttta tttgtggggg ccttcaaggn agggtcgtgg ggggcagcgg 60
ggaggaanag ccganaaact gtgtgaccgg ggcctcaggt ggtgggcatt gggggctcct 120
cttgcanatg cccattggca tcaccggtgc agccattggt ggcagcgggt accggtcctt 180
tcttgttcaa catagggtag gtggcagcca cgggtccaac tcgcttgagg ctgggccctg 240
ggcgctccat tttgtgttcc angagcatgt ggttctgtgg cgggagcccc acgcaggccc 300
tgaggatgtt ctcgatgcag ctgcgctggc ggaaaa 336

<210> 287
<211> 301
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 15, 33, 44, 53, 76, 83, 107, 117, 154, 166, 192, 194, 207,
215, 241, 246
<223> n = A,T,C or G

<400> 287
tgggtaccaa atttntttat ttgaaggaat ggnacaaatc aaanaactta agnggatgtt 60
ttggtacaac ttatanaaaa ggnaaaggaa accccaacat gcatgcnctg ccttggngac 120
cagggaagtc accccacggc tatggggaaa ttancccgag gcttancttt cattatcact 180
gtctcccagg gngngcttgt caaaaanata ttccnccaag ccaaattcgg gcgctcccat 240
nttgcncaag ttggtcacgt ggtcacccaa ttctttgatg gctttcacct gctcattcag 300
g 301

<210> 288
<211> 358
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 39, 143, 226
<223> n = A,T,C or G

<400> 288
aagtttttaa acttttttatt tgcatattaa aaaaattgng cattccaata attaaaatca 60
tttgaacaaa aaaaaaaatg gcactctgat taaactgcat tacagcctgc aggacacctt 120
gggccagctt ggttttactc tanatttcac tgtcgtccca ccccacttct tccaccccac 180
ttcttccttc accaacatgc aagttctttc cttccctgcc agccanatag atagacagat 240
gggaaaggca ggcgcggcct tcgttgtcag tagttctttg atgtgaaagg ggcagcacag 300

tcatttaaac ttgatccaac ctctttgcat cttacaaagt taaacagcta aaagaagt 358

<210> 289
<211> 462
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 87, 141, 182, 220, 269, 327
<223> n = A,T,C or G

<400> 289
ggcatcagaa atgctgttta tttctctgct gctcccaagc tggctggcct ttgcagagga 60
gcagacaaca gatgcatagt tgggganaaa gggaggacag gttccaggat agagggtgca 120
ggctgaggga ggaagggtaa naggaaggaa ggccatcctg gatccccaca tttcagtctc 180
anatgaggac aaagggactc ccaagccccc aaatcatcan aaaacaccaa ggagcaggag 240
gagcttgagc aggccccagg gagcctcana gccataccag ccactgtcta cttcccatcc 300
tcctctccca ttccctgtct gcttcanacc acctcccagc taagccccag ctccattccc 360
ccaatcctgg cccttgccag cttgacagtc acagtgcctg gaattccacc actgaggctt 420
ctcccagttg gattaggacg tcgccctgtt agcatgctgc cc 462

<210> 290
<211> 481
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 44, 57, 122, 158, 304, 325, 352, 405
<223> n = A,T,C or G

<400> 290
tactttccta aactttatta aagaaaaaag caataagcaa tggnggtaaa tctctanaac 60
atacccaatt ttctgggctt cctccccccga gaatgtgaca ttttgatttc caaacatgcc 120
anaagtgtat ggttcccaac tgtactaaag taggtganaa gctgaagtcc tcaagtgttc 180
atcttccaac ttttcccagt ctgtggtctg tctttggatc agcaataatt gcctgaacag 240
ctactatggc ttcgttgatt tttgtctgta gctctctgag ctcctctatg tgcagcaatc 300
gcanaatttg agcagcttca ttaanaactg catctcctgt gtcaaaacca anaatatgtt 360
tgtctaaagc aacaggtaag ccctcttttg tttgatttgc cttancaact gcatcctgtg 420
tcaggcgctc ctgaaccaaa atccgaattg ccttaagcat taccaggtaa tcatcatgac 480
g 481

<210> 291
<211> 381
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 79, 166, 187, 208, 219, 315
<223> n = A,T,C or G

<400> 291

tcatagtaat gtaaaaccat ttgtttaatt ctaaatcaaa tcactttcac aacagtgaaa 60
attagtgact ggttaaggng tgccactgta catatcatca ttttctgact ggggtcagga 120
cctggtccta gtccacaagg gtggcaggag gagggtggag gctaanaaca cagaaaacac 180
acaaaanaaa ggaaagctgc cttggcanaa ggatgaggng gtgagcttgc cgaaggatgg 240
tgggaagggg gctccctgtt ggggccgagc caggagtccc aagtcagctc tcctgcctta 300
cttagctcct ggcanagggt gagtggggac ctacgaggtt caaaatcaaa tggcatttgg 360
ccagcctggc tttactaaca g 381

<210> 292
<211> 371
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 32, 55, 72, 151, 189, 292
<223> n = A,T,C or G

<400> 292
gaaaaaataa tccgtttaat tgaaaaacct gnaggatact attccactcc cccanatgag 60
gaggctgagg anaccaaacc cctacatcac ctcgtagcca cttctgatac tcttcacgag 120
gcagcaggca aagacaattc ccaaaacctc nacaaaagca attccaaggg ctgctgcagc 180
taccaccanc acatttttcc tcagccagcc cccaatcttc tccacacagc cctccttatg 240
gatcgccttc tcgttgaaat taatcccaca gcccacagta acattaatgc ancaggagtc 300
ggggactcgg ttcttcgaca tggaagggat tttctcccaa tctgtgtagt tagcagcccc 360
acagcactta a 371

<210> 293
<211> 361
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 75, 196, 222
<223> n = A,T,C or G

<400> 293
gatttaaaag aaaacacttt attgttcagc aattaaaagt tagccaaata tgtatttttc 60
tccataattt attgngatgt tatcaacatc aagtaaaatg ctcattttca tcatttgctt 120
ctgttcatgt tttcttgaac acgtcttcaa ttttccttcc aaaatgctgc atgccacact 180
tgaggtaacg aagcanaagt atttttaaac atgacagcta anaacattca tctacagcaa 240
cctatatgct caatacatgc cgcgtgatcc tagtagtttt ttcacaacct tctacaagtt 300
tttggaaaac atctgttatg atgactttca tacaccttca cctcaaaggc tttcttgcac 360
c 361

<210> 294
<211> 391
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 26, 77, 96, 150, 203, 252, 254, 264, 276

<223> n = A,T,C or G

<400> 294
tattttaaag tttaattatg attcanaaaa aatcgagcga ataactttct ctgaaaaaat 60
atattgactc tgtatanacc acagttattg gggganaagg gctggtaggt taaattatcc 120
tatttttat tctgaaaatg atattaatan aaagtcccgt ttccagtctg attataaaga 180
tacatatgcc caaaatggct ganaataaat acaacaggaa atgcaaaagc tgtaaagcta 240
agggcatgca ananaaaatc tcanaatacc caaagnggca acaaggaacg tttggctgga 300
atttgaagtt atttcagtca tctttgtctt tggctccatg tttcaggatg cgtgtgaact 360
cgatgtaatt gaaattcccc tttttatcaa t 391

<210> 295
<211> 343
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 145, 174, 205, 232
<223> n = A,T,C or G

<400> 295
ttcttttgtt ttattgataa cagaaactgt gcataattac agatttgatg aggaatctgc 60
aaataataaa gaatgtgtct actgccagca aaatacaatt attccatgcc ctctcaacat 120
acaaatatag agttcttcac accanatggc tctggtgtaa caaagccatt ttanatgttt 180
aattgtgctt ctacaaaacc ttcanagcat gaggtagttt cttttaccta cnatattttc 240
cacatttcca ttattacact tttagtgagc taaaatcctt ttaacatagc ctgcggatga 300
tctttcacaa aagccaagcc tcatttacaa agggtttatt tct 343

<210> 296
<211> 241
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 96, 98, 106, 185
<223> n = A,T,C or G

<400> 296
ttcttggata ttggttgttt ttgtgaaaaa gtttttgttt ttcttctcag tcaactgaat 60
tatttctcta ctttgccctc ctgatgccca catgananaa cttaanataa tttctaacag 120
cttccacttt ggaaaaaaaa aaaacctgtt ttcctcatgg aaccccagga gttgaaagtg 180
gatanatcgc tctcaaaatc taaggctctg ttcagcttta cattatgtta cctgacgttt 240
t 241

<210> 297
<211> 391
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 12, 130

<223> n = A,T,C or G

<400> 297
gttgtggctg anaatgctgg agatgctcag ttctctccct cacaaggtag gccacaaatt 60
cttggtggtg ccctcacatc tggggtcttc aggcaccagc catgcctgcc gaggagtgct 120
gtcaggacan accatgtccg tgctaggccc aggcacagcc caaccactcc tcatccaagt 180
ctctcccagg tttctggtcc cgatgggcaa ggatgacccc tccagtggct ggtaccccac 240
catcccacta cccctcacat gctctcactc tccatcaggt ccccaatcct ggcttccctc 300
ttcacgaact ctcaaagaaa aggaaggata aaacctaaat aaaccagaca gaagcagctc 360
tggaaaagta caaaaagaca gccagaggtg t 391

<210> 298
<211> 321
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 14, 30, 76, 116, 201, 288, 301
<223> n = A,T,C or G

<400> 298
caagccaaac tgtntccagc tttattaaan atactttcca taaacaatca tggtatttca 60
ggcaggacat gggcanacaa tcgttaacag tatacaacaa ctttcaaact ccctttnttca 120
atggactacc aaaaatcaaa aagccactat aaaacccaat gaagtcttca tctgatgctc 180
tgaacaggga aagtttaaag ngagggttga catttcacat ttagcatgtt gtttaacaac 240
ttttcacaag ccgaccctga ctttcaggaa gtgaaatgaa aatggcanaa tttatctgaa 300
natccacaat ctaaaaatgg a 321

<210> 299
<211> 401
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 104, 268, 347
<223> n = A,T,C or G

<400> 299
tatcataaag agtgttgaag tttatttatt atagcaccat tgagacattt tgaaattgga 60
attggtaaaa aaataaaaca aaaagcattt gaattgtatt tggnggaaca gcaaaaaaag 120
agaagtatca tttttctttg tcaaattata ctgtttccaa acattttgga aataaataac 180
tggaattttg tcggtcactt gcactggttg acaagattag aacaagagga acacatatgg 240
agttaaattt tttttgttgg gatttcanat agagtttggt ttataaaaag caaacagggc 300
caacgtccac accaaattct tgatcaggac caccaatgtc atagggngca atatctacaa 360
taggtagtct cacagccttg cgtgttcgat attcaaagac t 401

<210> 300
<211> 188
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> 48
<223> n = A,T,C or G

<400> 300
tgaatgcttt gtcatattaa gaaagttaaa gtgcaataat gtttgaanac aataagtggt 60
ggtgtatctt gtttctaata agataaactt ttttgtcttt gctttatctt attagggagt 120
tgtatgtcag tgtataaaac atactgtgtg gtataacagg cttaataaat tctttaaaag 180
gaaaaaaa 188

<210> 301
<211> 291
<212> DNA
<213> Homo sapiens

<400> 301
aagattttgt tttattttat tatggctaga aagacactgt tatagccaaa atcggcaatg 60
acactaaaga aatcctctgt gcttttcaat atgcaaatat atttcttcca agagttgccc 120
tggtgtgact tcaagagttc atgttaactt cttttctgga aacttccttt tcttagttgt 180
tgtattcttg aagagcctgg gccatgaaga gcttgcctaa gttttgggca gtgaactcct 240
tgatgttctg gcagtaagtg tttatctggc ctgcaatgag cagcgagtcc a 291

<210> 302
<211> 341
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 25
<223> n = A,T,C or G

<400> 302
tgatttttca taattttatt aaatnatcac tgggaaaact aatggttcgc gtatcacaca 60
attacactac aatctgatag gagtggtaaa accagccaat ggaatccagg taaagtacaa 120
aaacgccacc ttttattgtc ctgtcttatt tctcgggaag gagggttcta ctttacacat 180
ttcatgagcc agcagtggac ttgagttaca atgtgtaggt tccttgtggt tatagctgca 240
gaagaagcca tcaaattctt gaggacttga catctctcgg aaagaagcaa actagtggat 300
cccccgggct gcaggaattc gatatcaagc ttatcgatac c 341

<210> 303
<211> 361
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 15, 27, 92, 124, 127, 183, 198, 244, 320
<223> n = A,T,C or G

<400> 303
tgcagacagt aaatnaattt tatttgngtt cacagaacat actaggcgat ctcgacagtc 60
gctccgtgac agcccaccaa cccccaaccc tntacctcgc agccacccta aaggcgactt 120
caanaanatg gaaggatctc acggatctca ttcctaatgg tccgccgaag tctcacacag 180

tanacagacg gagttganat gctggaggat gcagtcacct cctaaactta cgacccacca 240
ccanacttca tcccagccgg gacgtcctcc cccacccgag tcctccccat ttcttctcct 300
actttgccgc agttccaggn gtcctgcttc caccagtccc acaaagctca ataaatacca 360
a 361

<210> 304
<211> 301
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 23, 104, 192
<223> n = A,T,C or G

<400> 304
ctctttacaa cagcctttat ttncggccct tgatcctgct cggatgctgg tggaggccct 60
tagctccgcc cgccaggctc tgtgccgcct ccccgcaggc gcanattcat gaacacggtg 120
ctcaggggct tgaggccgta ctcccccagc gggagctggt cctccagggg cttcccctcg 180
aaggtcagcc anaacaggtc gtcctgcaca ccctccagcc cgctcacttg ctgcttcagg 240
tgggccacgg tctgcgtcag ccgcacctcg taggtgctgc tgcggccctt gttattcctc 300
a 301

<210> 305
<211> 331
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 3, 36, 60, 193, 223
<223> n = A,T,C or G

<400> 305
ganaggctag taacatcagt tttattgggt tggggnggca accatagcct ggctgggggn 60
ggggctggcc ctcacaggtt gttgagttcc agcagggtct ggtccaaggt ctggtgaatc 120
tcgacgttct cctccttggc actggccaag gtctcttcta ggtcatcgat ggttttctcc 180
aactttgcca canacctctc ggcaaactct gctcgggtct cancctcctt cagcttctcc 240
tccaacagtt tgatctcctc ttcatattta tcttctttgg gggaatactc ctcctctgag 300
gccatcaggg acttgagggc ctggtccatg g 331

<210> 306
<211> 457
<212> DNA
<213> Homo sapiens

<400> 306
aatatgtaaa ggtaataact tttattatat taaagacaat gcaaacgaaa aacagaattg 60
agcagtgcaa aatttaaagg actgttttgt tctcaaagtt gcaagtttca aagccaaaag 120
aattatatgt atcaaatata taagtaaaaa aaagttagac tttcaagcct gtaatcccag 180
cactttggga ggctgaggca ggtggatcac taacattaaa aagacaacat tagattttgt 240
cgatttatag caattttata aatatataac tttgtcactt ggatcctgaa gcaaaataat 300
aaagtgaatt tgggattttt gtacttggta aaaagtttaa caccctaaat tcacaactag 360
tggatccccc gggctgcagg aattcgatat caagcttatc gataccgtcg acctcgaggg 420

ggggcccggt acccaattcg ccctatagtg agtcgta 457

<210> 307
<211> 491
<212> DNA
<213> Homo sapiens

<400> 307
gtgcttggac ggaacccggc gctcgttccc caccccggcc ggccgcccat agccagccct 60
ccgtcacctc ttcaccgcac cctcggactg ccccaaggcc cccgccgccg ctccagcgcc 120
gcgcagccac cgccgccgcc gccgcctctc cttagtcgcc gccatgacga ccgcgtccac 180
ctcgcaggtg cgccagaact accaccagga ctcagaggcc gccatcaacc gccagatcaa 240
cctggagctc tacgcctcct acgtttacct gtccatgtct tactactttg accgcgatga 300
tgtggctttg aagaactttg ccaaatactt tcttcaccaa tctcatgagg agagggaaca 360
tgctgagaaa ctgatgaagc tgcagaacca acgaggtggc cgaatcttcc ttcaggatat 420
caagaaacca gactgtgatg actgggagag cgggctgaat gcaatggagt gtgcattaca 480
tttggaaaaa a 491

<210> 308
<211> 421
<212> DNA
<213> Homo sapiens

<400> 308
ctcagcgctt cttctttctt ggtttgatcc tgactgctgt catggcgtgc cctctggaga 60
aggccctgga tgtgatggtg tccaccttcc acaagtactc gggcaaagag ggtgacaagt 120
tcaagctcaa caagtcagaa ctaaaggagc tgctgacccg ggagctgccc agcttcttgg 180
ggaaaaggac agatgaagct gctttccaga agctgatgag caacttggac agcaacaggg 240
acaacgaggt ggacttccaa gagtactgtg tcttcctgtc ctgcatcgcc atgatgtgta 300
acgaattctt tgaaggcttc ccagataagc agcccaggaa gaaatgaaaa ctcctctgat 360
gtggttgggg ggtctgccag ctggggccct ccctgtcgcc agtgggcact ttttttttc 420
c 421

<210> 309
<211> 321
<212> DNA
<213> Homo sapiens

<400> 309
accaaatggc ggatgacgcc ggtgcagcgg gggggcccgg gggccctggt ggccctggga 60
tggggaaccg cggtggcttc cgcggaggtt tcggcagtgg catccggggc cggggtcgcg 120
gccgtggacg gggccggggc cgaggccgcg gagctcgcgg aggcaaggcc gaggataagg 180
agtggatgcc cgtcaccaag ttgggccgct tggtcaagga catgaagatc aagtccctgg 240
aggagatcta tctcttctcc ctgcccatta aggaatcaga gatcattgat ttcttcctgg 300
gggcctctct caaggatgag g 321

<210> 310
<211> 381
<212> DNA
<213> Homo sapiens

<400> 310
ttaaccagcc atattggctc aataaatagc ttcggtaagg agttaatttc cttctagaaa 60
tcagtgccta tttttcctgg aaactcaatt ttaaatagtc caattccatc tgaagccaag 120

ctgttgtcat tttcattcgg tgacattctc tcccatgaca cccagaaggg gcagaagaac 180
cacatttttc atttatagat gtttgcatcc tttgtattaa aattattttg aaggggttgc 240
ctcattggat ggctttttt ttttttcctcc agggagaagg ggagaaatgt acttggaaat 300
taatgtatgt ttacatctct ttgcaaattc ctgtacatag agatatattt tttaagtgtg 360
aatgtaacaa catactgtga a 381

<210> 311
<211> 538
<212> DNA
<213> Homo sapiens

<400> 311
tttgaattta caccaagaac ttctcaataa aagaaaatca tgaatgctcc acaatttcaa 60
cataccacaa gagaagttaa tttcttaaca ttgtgttcta tgattatttg taagaccttc 120
accaagttct gatatctttt aaagacatag ttcaaaattg cttttgaaaa tctgtattct 180
tgaaaatatc cttgttgtgt attaggtttt taaataccag ctaaaggatt acctcactga 240
gtcatcagta ccctcctatt cagctcccca agatgatgtg tttttgctta ccctaagaga 300
ggttttcttc ttatttttag ataattcaag tgcttagata aattatgttt tctttaagtg 360
tttatggtaa actcttttaa agaaaattta atatgttata gctgaatctt tttggtaact 420
ttaaatcttt atcatagact ctgtacatat gttcaaatta gctgcttgcc tgatgtgtgt 480
atcatcggtg ggatgacaga acaaacatat ttatgatcat gaataatgtg ctttgtaa 538

<210> 312
<211> 176
<212> DNA
<213> Homo sapiens

<400> 312
ggaggagcag ctgagagata gggtcagtga atgcggttca gcctgctacc tctcctgtct 60
tcatagaacc attgccttag aattattgta tgacacgttt tttgttggtt aagctgtaag 120
gttttgttct ttgtgaacat gggtattttg aggggagggt ggagggagta gggaag 176

<210> 313
<211> 396
<212> DNA
<213> Homo sapiens

<400> 313
ccagcacccc caggccctgg gggacctggg ttctcagact gccaaagaag ccttgccatc 60
tggcgctccc atggctcttg caacatctcc ccttcgtttt tgaggggtc atgccggggg 120
agccaccagc ccctcactgg gttcggagga gagtcaggaa gggccaagca cgacaaagca 180
gaaacatcgg atttggggaa cgcgtgtcaa tcccttgtgc cgcagggctg ggcgggagag 240
actgttctgt tccttgtgta actgtgttgc tgaaagacta cctcgttctt gtcttgatgt 300
gtcaccgggg caactgcctg ggggcgggga tgggggcagg gtggaagcgg ctccccattt 360
tataccaaag gtgctacatc tatgtgatgg gtgggg 396

<210> 314
<211> 311
<212> DNA
<213> Homo sapiens

<400> 314
cctcaacatc ctcagagagg actggaagcc agtccttacg ataaactcca taatttatgg 60
cctgcagtat ctcttcttgg agcccaaccc cgaggaccca ctgaacaagg aggccgcaga 120

ggtcctgcag aacaaccggc ggctgtttga gcagaacgtg cagcgctcca tgcggggtgg 180
ctacatcggc tccacctact ttgagcgctg cctgaaatag ggttggcgca tacccacccc 240
cgccacggcc acaagccctg gcatcccctg caaatattta ttgggggcca tgggtagggg 300
tttggggggc g 311

<210> 315
<211> 336
<212> DNA
<213> Homo sapiens

<400> 315
tttagaacat ggttatcatc caagactact ctaccctgca acattgaact cccaagagca 60
aatccacatt cctcttgagt tctgcagctt ctgtgtaaat agggcagctg tcgtctatgc 120
cgtagaatca catgatctga ggaccattca tggaagctgc taaatagcct agtctgggga 180
gtcttccata aagttttgca tggagcaaac aaacaggatt aaactaggtt tggttccttc 240
agccctctaa aagcataggg cttagcctgc aggcttcctt gggctttctc tgtgtgtgta 300
gttttgtaaa cactatagca tctgttaaga tccagt 336

<210> 316
<211> 436
<212> DNA
<213> Homo sapiens

<400> 316
aacatggtct gcgtgcctta agagagacgc ttcctgcaga acaggacctg actacaaaga 60
atgtttccat tggaattgtt ggtaaagact tggagtttac aatctatgat gatgatgatg 120
tgtctccatt cctggaaggt cttgaagaaa gaccacagag aaaggcacag cctgctcaac 180
ctgctgatga acctgcagaa aaggctgatg aaccaatgga acattaagtg ataagccagt 240
ctatatatgt attatcaaat atgtaagaat acaggcacca catactgatg acaataatct 300
atactttgaa ccaaaagttg cagagtggtg gaatgctatg ttttaggaat cagtccagat 360
gtgagttttt tccaagcaac ctcactgaaa cctatataat ggaatacatt tttctttgaa 420
agggtctgta taatca 436

<210> 317
<211> 196
<212> DNA
<213> Homo sapiens

<400> 317
tattccttgt gaagatgata tactattttt gttaagcgtg tctgtattta tgtgtgagga 60
gctgctggct tgcagtgcgc gtgcacgtgg agagctggtg cccggagatt ggacggcctg 120
atgctccctc ccctgccctg gtccagggaa gctggccgag ggtcctggct cctgaggggc 180
atctgccccc ccccca 196

<210> 318
<211> 381
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 8, 9, 102, 122, 167, 182, 193, 235, 253, 265, 266, 290, 321,
378
<223> n = A,T,C or G

<400> 318
gacgcttnng ccgtaacgat gatcggagac atcctgctgt tcgggacgtt gctgatgaat 60
gccggggcgg tgctgaactt taagctgaaa aagaaggaca cncagggctt tggggaggag 120
tncagggagc ccaacacagg tgacaacatc cgggaattct tgctgancct cagatacttt 180
cnaatcttca tncccctgtg gaacatcttc atgatgttct gcatgattgt gctgntcggc 240
tcttgaatcc cancgatgaa accannaact cactttcccg ggatgccgan tctccattcc 300
tccattcctg atgacttcaa naatgttttt gaccaaaaaa ccgacaacct tcccagaaag 360
tccaagctcg tggtgggngg a 381

<210> 319
<211> 506
<212> DNA
<213> Homo sapiens

<400> 319
ctaagcttta cgaatggggt gacaacttat gataaaaact agagctagtg aattagccta 60
tttgtaaata cctttgttat aattgatagg atacatcttg gacatggaat tgttaagcca 120
cctctgagca gtgtatgtca ggacttgttc attaggttgg cagcagaggg gcagaaggaa 180
ttatacaggt agagatgtat gcagatgtgt ccatatatgt ccatatttac attttgatag 240
ccattgatgt atgcatctct tggctgtact ataagaacac attaattcaa tggaaataca 300
ctttgctaat attttaatgg tatagatctg ctaatgaatt ctcttaaaaa catactgtat 360
tctgttgctg tgtgtttcat tttaaattga gcattaaggg aatgcagcat ttaaatcaga 420
actctgccaa tgcttttatc tagaggcgtg ttgccatttt tgtcttatat gaaatttctg 480
tcccaagaaa ggcaggatta catctt 506

<210> 320
<211> 351
<212> DNA
<213> Homo sapiens

<400> 320
ctgacctgca ggacgaaacc atgaagagcc tgatccttct tgccatcctg gccgccttag 60
cggtagtaac tttgtgttat gaatcacatg aaagcatgga atcttatgaa cttaatccct 120
tcattaacag gagaaatgca aataccttca tatcccctca gcagagatgg agagctaaag 180
tccaagagag gatccgagaa cgctctaagc ctgtccacga gctcaatagg gaagcctgtg 240
atgactacag actttgcgaa cgctacgcca tggtttatgg atacaatgct gcctataatc 300
gctacttcag gaagcgccga gggaccaaat gagactgagg gaagaaaaaa a 351

<210> 321
<211> 421
<212> DNA
<213> Homo sapiens

<400> 321
ctcggaggcg ttcagctgct tcaagatgaa gctgaacatc tccttcccag ccactggctg 60
ccagaaactc attgaagtgg acgatgaacg caaacttcgt actttctatg agaagcgtat 120
ggccacagaa gttgctgctg acgctctggg tgaagaatgg aagggttatg tggtccgaat 180
cagtggtggg aacgacaaac aaggtttccc catgaagcag ggtgtcttga cccatggccg 240
tgtccgcctg ctactgagta aggggcattc ctgttacaga ccaaggagaa ctggagaaag 300
aaagagaaaa tcagttcgtg gttgcattgt ggatgcaaat ctgagcgttc tcaacttggt 360
tattgtaaaa aaaggagaga aggatattcc tggactgact gatactacag tgcctcgccg 420
c 421

<210> 322
<211> 521
<212> DNA
<213> Homo sapiens

<400> 322
agcagctctc ctgccacagc tcctcacccc ctgaaaatgt tcgcctgctc caagtttgtc 60
tccactccct ccttggtcaa gagcacctca cagctgctga gccgtccgct atctgcagtg 120
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gctgggattg gaactgtgtt tgggagcctc atcattggtt atgccaggaa cccttctctg 360
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ttttgtctga tggtagcctt tctcatcctc tttgccatgt gaaggagccg tctccacctc 480
ccatagttct cccgcgtctg gttggccccg tgtgttcctt t 521

<210> 323
<211> 435
<212> DNA
<213> Homo sapiens

<400> 323
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atcttggaca gcgtgggtat cgaggcggac gacgaccggc tcaacaaggt tatcagtgag 180
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cctgctggtg gggctgtagc cgtctctgct gccccaggct ctgcagcccc tgctgctggt 300
tctgcccctg ctgcagcaga ggagaagaaa gatgagaaga aggaggagtc tgaagagtca 360
gatgatgaca tgggatttgg ccttttttgat taaattcctg ctcccctgca aataaagcct 420
ttttacacat ctcaa 435

<210> 324
<211> 521
<212> DNA
<213> Homo sapiens

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agcacctggt ccagcagcag ccccccctcgc agccgcagcc gcagccgcag ctccagcccc 180
aaccccagcc tcagcctcag ccgcaacccc agccccaatc acaaccccag cctcagcccc 240
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cacacccaca gccgcactcg cagccgcacg ggcaccggct tctccgcagc acctccaact 420
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gagcacattt ctattgtctt cacttggatc aaaagcaaaa c 521

<210> 325
<211> 451
<212> DNA
<213> Homo sapiens

<400> 325
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acattattta aacagaaaaa gatgggctct ttctggttag ttgttacatg atagcagaga 120
tatttttact tagattactt tgggaatgag agattgttgt cttgaactct ggcactgtac 180
agtgaatgtg tctgtagttg tgttagtttg cattaagcat gtataacatt caagtatgtc 240
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acccccaccc ccacccaaga cattttaata gtaaatagag agagagagaa gagttaatga 360
acatgaggta gtgttccact ggcaggatga cttttcaata gctcaaatca atttcagtgc 420
ctttatcact tgaattatta acttaatttg a 451

<210> 326
<211> 421
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 296
<223> n = A,T,C or G

<400> 326
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ggataccgga aaaacacccg tggagccgga ggtggcaatt caccgaattc gaatcaccct 180
aacaagccgc aacgtaaaat ccttggaaaa ggtgtgtgct gacttgataa gaggcgcaaa 240
agaaaagaat ctcaaagtga aaggaccagt tcgaatgcct accaagactt tgagantcac 300
tacaagaaaa actccttgtg gtgaaggttc taagacgtgg gatcgtttcc agatgagaat 360
tcacaagcga ctcattgact tgcacagtcc ttctgagatt gttaagcaga ttacttccat 420
c 421

<210> 327
<211> 456
<212> DNA
<213> Homo sapiens

<400> 327
atcttgacga ggctgcggtg tctgctgcta ttctccgagc ttcgcaatgc cgcctaagga 60
cgacaagaag aagaaggacg ctggaaagtc ggccaagaaa gacaaagacc cagtgaacaa 120
atccgggggc aaggccaaaa agaagaagtg gtccaaaggc aaagttcggg acaagctcaa 180
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atgaataggt ccaaccagct gtacatttgg aaaaat 456

<210> 328
<211> 471
<212> DNA
<213> Homo sapiens

<400> 328
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cagggaagac agggcgacct ggaagtccaa ctacttcctt aagatcatcc aactattgga 120
tgattatccg aaatgtttca ttgtgggagc agacaatgtg ggctccaagc agatgcagca 180
gatccgcatg tcccttcgcg ggaaggctgt ggtgctgatg ggcaagaaca ccatgatgcg 240
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gctggccaat aaggtgccag ctgctgcccg tgctggtgcc attgccccat gtgaagtcac 420
tgtgccagcc cagaacactg gtctcgggcc cgagaagacc tccttttcc a 471

<210> 329
<211> 278
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 154, 204
<223> n = A,T,C or G

<400> 329
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aaattgagat gccccccag gccagcaaat gttccttttt gttcaaagtc tatttttatt 120
ccttgatatt tttcttttt ttttttttt ttgnggatgg ggacttgtga atttttctaa 180
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tccaccctct ctccacctgc ctctggcttc tcaggcct 278

<210> 330
<211> 338
<212> DNA
<213> Homo sapiens

<400> 330
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cctgttctta tgaattcgaa cagcataccc ccgattccgc tacgaccaac tcatacacct 240
cctatgaaaa aacttcctac cactcaccct agcattactt atatgatatg tctccatacc 300
cattacaatc tccagcattc cccctcaaac ctaaaaaa 338

<210> 331
<211> 2820
<212> DNA
<213> Homo sapiens

<400> 331
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gctcctgaac agcatggacc agcagattcg gaacggctcc tcgtccacca gtccctataa 180
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ctaaatttca ctactagatt gactaactca aatacacatt tgctactgtt gtaagaattc 2820

<210> 332
<211> 2270
<212> DNA
<213> Homo sapiens

<400> 332
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acagtactgc cctgaccctt acatccagcg tttcgtagaa acccagctca tttctcttgg 120
aaagaaagtt attaccgatc caccatgtcc cagagcacac agacaaatga attcctcagt 180
ccagaggttt tccagcatat ctgggatttt ctggaacagc ctatatgttc agttcagccc 240
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<210> 333
<211> 2816
<212> DNA
<213> Homo sapiens

<400> 333
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<210> 334
<211> 2082
<212> DNA
<213> *Homo sapiens*

<400> 334
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<212> DNA
<213> Homo sapiens

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<211> 586
<212> PRT
<213> Homo sapiens

<400> 338

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			20					25					30		
Gly	Ser	Ser	Ser	Thr	Ser	Pro	Tyr	Asn	Thr	Asp	His	Ala	Gln	Asn	Ser
		35					40					45			
Val	Thr	Ala	Pro	Ser	Pro	Tyr	Ala	Gln	Pro	Ser	Pro	Thr	Phe	Asp	Ala
	50					55					60				
Leu	Ser	Pro	Ser	Pro	Ala	Ile	Pro	Ser	Asn	Thr	Asp	Tyr	Pro	Gly	Pro
65					70					75					80
His	Ser	Ser	Asp	Val	Ser	Phe	Gln	Gln	Ser	Ser	Thr	Ala	Lys	Ser	Ala
				85					90					95	
Thr	Trp	Thr	Tyr	Ser	Thr	Glu	Leu	Lys	Lys	Leu	Tyr	Cys	Gln	Ile	Ala
			100					105					110		
Lys	Thr	Cys	Pro	Ile	Gln	Ile	Lys	Val	Met	Thr	Pro	Pro	Pro	Gln	Gly
		115					120					125			
Ala	Val	Ile	Arg	Ala	Met	Pro	Val	Tyr	Lys	Lys	Ala	Glu	His	Val	Thr
	130					135					140				
Glu	Val	Val	Lys	Arg	Cys	Pro	Asn	His	Glu	Leu	Ser	Arg	Glu	Phe	Asn
145					150					155					160
Glu	Gly	Gln	Ile	Ala	Pro	Pro	Ser	His	Leu	Ile	Arg	Val	Glu	Gly	Asn
				165					170					175	
Ser	His	Ala	Gln	Tyr	Val	Glu	Asp	Pro	Ile	Thr	Gly	Arg	Gln	Ser	Val
			180					185					190		
Leu	Val	Pro	Tyr	Glu	Pro	Pro	Gln	Val	Gly	Thr	Glu	Phe	Thr	Thr	Val
		195					200					205			
Leu	Tyr	Asn	Phe	Met	Cys	Asn	Ser	Ser	Cys	Val	Gly	Gly	Met	Asn	Arg
	210					215					220				
Arg	Pro	Ile	Leu	Ile	Ile	Val	Thr	Leu	Glu	Thr	Arg	Asp	Gly	Gln	Val
225					230					235					240
Leu	Gly	Arg	Arg	Cys	Phe	Glu	Ala	Arg	Ile	Cys	Ala	Cys	Pro	Gly	Arg
				245					250					255	
Asp	Arg	Lys	Ala	Asp	Glu	Asp	Ser	Ile	Arg	Lys	Gln	Gln	Val	Ser	Asp
			260					265					270		
Ser	Thr	Lys	Asn	Gly	Asp	Gly	Thr	Lys	Arg	Pro	Phe	Arg	Gln	Asn	Thr
		275					280					285			
His	Gly	Ile	Gln	Met	Thr	Ser	Ile	Lys	Lys	Arg	Arg	Ser	Pro	Asp	Asp
	290					295					300				
Glu	Leu	Leu	Tyr	Leu	Pro	Val	Arg	Gly	Arg	Glu	Thr	Tyr	Glu	Met	Leu
305					310					315					320
Leu	Lys	Ile	Lys	Glu	Ser	Leu	Glu	Leu	Met	Gln	Tyr	Leu	Pro	Gln	His
				325					330					335	
Thr	Ile	Glu	Thr	Tyr	Arg	Gln	Gln	Gln	Gln	Gln	Gln	His	Gln	His	Leu
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Ser Gln Leu Ile Asn Pro Gln Gln Arg Asn Ala Leu Thr Pro Thr Thr
385                 390                 395                 400
Ile Pro Asp Gly Met Gly Ala Asn Ile Pro Met Met Gly Thr His Met
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Pro Met Ala Gly Asp Met Asn Gly Leu Ser Pro Thr Gln Ala Leu Pro
            420                 425                 430
Pro Pro Leu Ser Met Pro Ser Thr Ser His Cys Thr Pro Pro Pro Pro
        435                 440                 445
Tyr Pro Thr Asp Cys Ser Ile Val Ser Phe Leu Ala Arg Leu Gly Cys
    450                 455                 460
Ser Ser Cys Leu Asp Tyr Phe Thr Thr Gln Gly Leu Thr Thr Ile Tyr
465                 470                 475                 480
Gln Ile Glu His Tyr Ser Met Asp Asp Leu Ala Ser Leu Lys Ile Pro
                485                 490                 495
Glu Gln Phe Arg His Ala Ile Trp Lys Gly Ile Leu Asp His Arg Gln
            500                 505                 510
Leu His Glu Phe Ser Ser Pro Ser His Leu Leu Arg Thr Pro Ser Ser
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Ala Ser Thr Val Ser Val Gly Ser Ser Glu Thr Arg Gly Glu Arg Val
    530                 535                 540
Ile Asp Ala Val Arg Phe Thr Leu Arg Gln Thr Ile Ser Phe Pro Pro
545                 550                 555                 560
Arg Asp Glu Trp Asn Asp Phe Asn Phe Asp Met Asp Ala Arg Arg Asn
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Lys Gln Gln Arg Ile Lys Glu Glu Gly Glu
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<212> PRT
<213> Homo sapiens

<400> 339

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Ile Asp Leu Asn Phe Val Asp Glu Pro Ser Glu Asp Gly Ala Thr Asn
        35                  40                  45
Lys Ile Glu Ile Ser Met Asp Cys Ile Arg Met Gln Asp Ser Asp Leu
    50                  55                  60
Ser Asp Pro Met Trp Pro Gln Tyr Thr Asn Leu Gly Leu Leu Asn Ser
65                  70                  75                  80
Met Asp Gln Gln Ile Gln Asn Gly Ser Ser Ser Thr Ser Pro Tyr Asn
                85                  90                  95
Thr Asp His Ala Gln Asn Ser Val Thr Ala Pro Ser Pro Tyr Ala Gln
            100                 105                 110
Pro Ser Ser Thr Phe Asp Ala Leu Ser Pro Ser Pro Ala Ile Pro Ser
        115                 120                 125
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Ser Ser Thr Ala Lys Ser Ala Thr Trp Thr Tyr Ser Thr Glu Leu Lys
145                 150                 155                 160
Lys Leu Tyr Cys Gln Ile Ala Lys Thr Cys Pro Ile Gln Ile Lys Val
                165                 170                 175
Met Thr Pro Pro Pro Gln Gly Ala Val Ile Arg Ala Met Pro Val Tyr
            180                 185                 190
Lys Lys Ala Glu His Val Thr Glu Val Val Lys Arg Cys Pro Asn His
        195                 200                 205
Glu Leu Ser Arg Glu Phe Asn Glu Gly Gln Ile Ala Pro Pro Ser His
    210                 215                 220
Leu Ile Arg Val Glu Gly Asn Ser His Ala Gln Tyr Val Glu Asp Pro
225                 230                 235                 240
Ile Thr Gly Arg Gln Ser Val Leu Val Pro Tyr Glu Pro Pro Gln Val
                245                 250                 255
Gly Thr Glu Phe Thr Thr Val Leu Tyr Asn Phe Met Cys Asn Ser Ser
            260                 265                 270
Cys Val Gly Gly Met Asn Arg Arg Pro Ile Leu Ile Ile Val Thr Leu
        275                 280                 285
Glu Thr Arg Asp Gly Gln Val Leu Gly Arg Arg Cys Phe Glu Ala Arg
    290                 295                 300
Ile Cys Ala Cys Pro Gly Arg Asp Arg Lys Ala Asp Glu Asp Ser Ile
305                 310                 315                 320
Arg Lys Gln Gln Val Ser Asp Ser Thr Lys Asn Gly Asp Gly Thr Lys
                325                 330                 335
Arg Pro Phe Arg Gln Asn Thr His Gly Ile Gln Met Thr Ser Ile Lys
            340                 345                 350
Lys Arg Arg Ser Pro Asp Asp Glu Leu Leu Tyr Leu Pro Val Arg Gly
        355                 360                 365
Arg Glu Thr Tyr Glu Met Leu Leu Lys Ile Lys Glu Ser Leu Glu Leu
    370                 375                 380
Met Gln Tyr Leu Pro Gln His Thr Ile Glu Thr Tyr Arg Gln Gln Gln
385                 390                 395                 400
Gln Gln Gln His Gln His Leu Leu Gln Lys Gln Thr Ser Ile Gln Ser
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Pro Ser Ser Tyr Gly Asn Ser Ser Pro Pro Leu Asn Lys Met Asn Ser
            420                 425                 430
Met Asn Lys Leu Pro Ser Val Ser Gln Leu Ile Asn Pro Gln Gln Arg
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Asn Ala Leu Thr Pro Thr Thr Ile Pro Asp Gly Met Gly Ala Asn Ile
    450                 455                 460
Pro Met Met Gly Thr His Met Pro Met Ala Gly Asp Met Asn Gly Leu
465                 470                 475                 480
Ser Pro Thr Gln Ala Leu Pro Pro Pro Leu Ser Met Pro Ser Thr Ser
                485                 490                 495
His Cys Thr Pro Pro Pro Pro Tyr Pro Thr Asp Cys Ser Ile Val Gly
            500                 505                 510
Phe Leu Ala Arg Leu Gly Cys Ser Ser Cys Leu Asp Tyr Phe Thr Thr
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Gln Gly Leu Thr Thr Ile Tyr Gln Ile Glu His Tyr Ser Met Asp Asp
    530                 535                 540
Leu Ala Ser Leu Lys Ile Pro Glu Gln Phe Arg His Ala Ile Trp Lys
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Gly Ile Leu Asp His Arg Gln Leu His Glu Phe Ser Ser Pro Ser His
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            580                 585                 590
Glu Thr Arg Gly Glu Arg Val Ile Asp Ala Val Arg Phe Thr Leu Arg
        595                 600                 605
Gln Thr Ile Ser Phe Pro Pro Arg Asp Glu Trp Asn Asp Phe Asn Phe
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Asp Met Asp Ala Arg Arg Asn Lys Gln Gln Arg Ile Lys Glu Glu Gly
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Glu
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<210> 340
<211> 448
<212> PRT
<213> Homo sapiens

<400> 340

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Gln His Ile Trp Asp Phe Leu Glu Gln Pro Ile Cys Ser Val Gln Pro
            20                  25                  30
Ile Asp Leu Asn Phe Val Asp Glu Pro Ser Glu Asp Gly Ala Thr Asn
        35                  40                  45
Lys Ile Glu Ile Ser Met Asp Cys Ile Arg Met Gln Asp Ser Asp Leu
    50                  55                  60
Ser Asp Pro Met Trp Pro Gln Tyr Thr Asn Leu Gly Leu Leu Asn Ser
65                  70                  75                  80
Met Asp Gln Gln Ile Gln Asn Gly Ser Ser Ser Thr Ser Pro Tyr Asn
                85                  90                  95
Thr Asp His Ala Gln Asn Ser Val Thr Ala Pro Ser Pro Tyr Ala Gln
            100                 105                 110
Pro Ser Ser Thr Phe Asp Ala Leu Ser Pro Ser Pro Ala Ile Pro Ser
        115                 120                 125
Asn Thr Asp Tyr Pro Gly Pro His Ser Phe Asp Val Ser Phe Gln Gln
    130                 135                 140
Ser Ser Thr Ala Lys Ser Ala Thr Trp Thr Tyr Ser Thr Glu Leu Lys
145                 150                 155                 160
Lys Leu Tyr Cys Gln Ile Ala Lys Thr Cys Pro Ile Gln Ile Lys Val
                165                 170                 175
Met Thr Pro Pro Pro Gln Gly Ala Val Ile Arg Ala Met Pro Val Tyr
            180                 185                 190
Lys Lys Ala Glu His Val Thr Glu Val Val Lys Arg Cys Pro Asn His
        195                 200                 205
Glu Leu Ser Arg Glu Phe Asn Glu Gly Gln Ile Ala Pro Pro Ser His
    210                 215                 220
Leu Ile Arg Val Glu Gly Asn Ser His Ala Gln Tyr Val Glu Asp Pro
225                 230                 235                 240
Ile Thr Gly Arg Gln Ser Val Leu Val Pro Tyr Glu Pro Pro Gln Val
                245                 250                 255
Gly Thr Glu Phe Thr Thr Val Leu Tyr Asn Phe Met Cys Asn Ser Ser
            260                 265                 270
```

```
Cys Val Gly Gly Met Asn Arg Arg Pro Ile Leu Ile Ile Val Thr Leu
        275                 280                 285
Glu Thr Arg Asp Gly Gln Val Leu Gly Arg Arg Cys Phe Glu Ala Arg
    290                 295                 300
Ile Cys Ala Cys Pro Gly Arg Asp Arg Lys Ala Asp Glu Asp Ser Ile
305                 310                 315                 320
Arg Lys Gln Gln Val Ser Asp Ser Thr Lys Asn Gly Asp Gly Thr Lys
                325                 330                 335
Arg Pro Phe Arg Gln Asn Thr His Gly Ile Gln Met Thr Ser Ile Lys
            340                 345                 350
Lys Arg Arg Ser Pro Asp Asp Glu Leu Leu Tyr Leu Pro Val Arg Gly
        355                 360                 365
Arg Glu Thr Tyr Glu Met Leu Leu Lys Ile Lys Glu Ser Leu Glu Leu
    370                 375                 380
Met Gln Tyr Leu Pro Gln His Thr Ile Glu Thr Tyr Arg Gln Gln Gln
385                 390                 395                 400
Gln Gln Gln His Gln His Leu Leu Gln Lys His Leu Leu Ser Ala Cys
                405                 410                 415
Phe Arg Asn Glu Leu Val Glu Pro Arg Arg Glu Thr Pro Lys Gln Ser
            420                 425                 430
Asp Val Phe Phe Arg His Ser Lys Pro Pro Asn Arg Ser Val Tyr Pro
        435                 440                 445
```

<210> 341
<211> 356
<212> PRT
<213> Homo sapiens

<400> 341

```
Met Leu Tyr Leu Glu Asn Asn Ala Gln Thr Gln Phe Ser Glu Pro Gln
 1               5                  10                  15
Tyr Thr Asn Leu Gly Leu Leu Asn Ser Met Asp Gln Gln Ile Gln Asn
            20                  25                  30
Gly Ser Ser Ser Thr Ser Pro Tyr Asn Thr Asp His Ala Gln Asn Ser
        35                  40                  45
Val Thr Ala Pro Ser Pro Tyr Ala Gln Pro Ser Ser Thr Phe Asp Ala
    50                  55                  60
Leu Ser Pro Ser Pro Ala Ile Pro Ser Asn Thr Asp Tyr Pro Gly Pro
65                  70                  75                  80
His Ser Phe Asp Val Ser Phe Gln Gln Ser Ser Thr Ala Lys Ser Ala
                85                  90                  95
Thr Trp Thr Tyr Ser Thr Glu Leu Lys Lys Leu Tyr Cys Gln Ile Ala
            100                 105                 110
Lys Thr Cys Pro Ile Gln Ile Lys Val Met Thr Pro Pro Pro Gln Gly
        115                 120                 125
Ala Val Ile Arg Ala Met Pro Val Tyr Lys Lys Ala Glu His Val Thr
    130                 135                 140
Glu Val Val Lys Arg Cys Pro Asn His Glu Leu Ser Arg Glu Phe Asn
145                 150                 155                 160
Glu Gly Gln Ile Ala Pro Pro Ser His Leu Ile Arg Val Glu Gly Asn
                165                 170                 175
Ser His Ala Gln Tyr Val Glu Asp Pro Ile Thr Gly Arg Gln Ser Val
            180                 185                 190
```

```
Leu Val Pro Tyr Glu Pro Pro Gln Val Gly Thr Glu Phe Thr Thr Val
        195                 200                 205
Leu Tyr Asn Phe Met Cys Asn Ser Ser Cys Val Gly Gly Met Asn Arg
    210                 215                 220
Arg Pro Ile Leu Ile Ile Val Thr Leu Glu Thr Arg Asp Gly Gln Val
225                 230                 235                 240
Leu Gly Arg Arg Cys Phe Glu Ala Arg Ile Cys Ala Cys Pro Gly Arg
                245                 250                 255
Asp Arg Lys Ala Asp Glu Asp Ser Ile Arg Lys Gln Gln Val Ser Asp
            260                 265                 270
Ser Thr Lys Asn Gly Asp Gly Thr Lys Arg Pro Ser Arg Gln Asn Thr
        275                 280                 285
His Gly Ile Gln Met Thr Ser Ile Lys Lys Arg Arg Ser Pro Asp Asp
    290                 295                 300
Glu Leu Leu Tyr Leu Pro Val Arg Gly Arg Glu Thr Tyr Glu Met Leu
305                 310                 315                 320
Leu Lys Ile Lys Glu Ser Leu Glu Leu Met Gln Tyr Leu Pro Gln His
                325                 330                 335
Thr Ile Glu Thr Tyr Arg Gln Gln Gln Gln Gln Gln His Gln His Leu
            340                 345                 350
Leu Gln Lys Gln
        355
```

<210> 342
<211> 680
<212> PRT
<213> Homo sapiens

<400> 342

```
Met Asn Phe Glu Thr Ser Arg Cys Ala Thr Leu Gln Tyr Cys Pro Asp
 1               5                  10                  15
Pro Tyr Ile Gln Arg Phe Val Glu Thr Pro Ala His Phe Ser Trp Lys
            20                  25                  30
Glu Ser Tyr Tyr Arg Ser Thr Met Ser Gln Ser Thr Gln Thr Asn Glu
        35                  40                  45
Phe Leu Ser Pro Glu Val Phe Gln His Ile Trp Asp Phe Leu Glu Gln
    50                  55                  60
Pro Ile Cys Ser Val Gln Pro Ile Asp Leu Asn Phe Val Asp Glu Pro
65                  70                  75                  80
Ser Glu Asp Gly Ala Thr Asn Lys Ile Glu Ile Ser Met Asp Cys Ile
                85                  90                  95
Arg Met Gln Asp Ser Asp Leu Ser Asp Pro Met Trp Pro Gln Tyr Thr
            100                 105                 110
Asn Leu Gly Leu Leu Asn Ser Met Asp Gln Gln Ile Gln Asn Gly Ser
        115                 120                 125
Ser Ser Thr Ser Pro Tyr Asn Thr Asp His Ala Gln Asn Ser Val Thr
    130                 135                 140
Ala Pro Ser Pro Tyr Ala Gln Pro Ser Ser Thr Phe Asp Ala Leu Ser
145                 150                 155                 160
Pro Ser Pro Ala Ile Pro Ser Asn Thr Asp Tyr Pro Gly Pro His Ser
                165                 170                 175
Phe Asp Val Ser Phe Gln Gln Ser Ser Thr Ala Lys Ser Ala Thr Trp
            180                 185                 190
```

```
Thr Tyr Ser Thr Glu Leu Lys Lys Leu Tyr Cys Gln Ile Ala Lys Thr
        195                 200                 205
Cys Pro Ile Gln Ile Lys Val Met Thr Pro Pro Pro Gln Gly Ala Val
    210                 215                 220
Ile Arg Ala Met Pro Val Tyr Lys Lys Ala Glu His Val Thr Glu Val
225                 230                 235                 240
Val Lys Arg Cys Pro Asn His Glu Leu Ser Arg Glu Phe Asn Glu Gly
                245                 250                 255
Gln Ile Ala Pro Pro Ser His Leu Ile Arg Val Glu Gly Asn Ser His
            260                 265                 270
Ala Gln Tyr Val Glu Asp Pro Ile Thr Gly Arg Gln Ser Val Leu Val
        275                 280                 285
Pro Tyr Glu Pro Pro Gln Val Gly Thr Glu Phe Thr Thr Val Leu Tyr
    290                 295                 300
Asn Phe Met Cys Asn Ser Ser Cys Val Gly Gly Met Asn Arg Arg Pro
305                 310                 315                 320
Ile Leu Ile Ile Val Thr Leu Glu Thr Arg Asp Gly Gln Val Leu Gly
                325                 330                 335
Arg Arg Cys Phe Glu Ala Arg Ile Cys Ala Cys Pro Gly Arg Asp Arg
            340                 345                 350
Lys Ala Asp Glu Asp Ser Ile Arg Lys Gln Gln Val Ser Asp Ser Thr
        355                 360                 365
Lys Asn Gly Asp Gly Thr Lys Arg Pro Phe Arg Gln Asn Thr His Gly
    370                 375                 380
Ile Gln Met Thr Ser Ile Lys Lys Arg Arg Ser Pro Asp Asp Glu Leu
385                 390                 395                 400
Leu Tyr Leu Pro Val Arg Gly Arg Glu Thr Tyr Glu Met Leu Leu Lys
                405                 410                 415
Ile Lys Glu Ser Leu Glu Leu Met Gln Tyr Leu Pro Gln His Thr Ile
            420                 425                 430
Glu Thr Tyr Arg Gln Gln Gln Gln Gln Gln His Gln His Leu Leu Gln
        435                 440                 445
Lys Gln Thr Ser Ile Gln Ser Pro Ser Ser Tyr Gly Asn Ser Ser Pro
    450                 455                 460
Pro Leu Asn Lys Met Asn Ser Met Asn Lys Leu Pro Ser Val Ser Gln
465                 470                 475                 480
Leu Ile Asn Pro Gln Gln Arg Asn Ala Leu Thr Pro Thr Thr Ile Pro
                485                 490                 495
Asp Gly Met Gly Ala Asn Ile Pro Met Met Gly Thr His Met Pro Met
            500                 505                 510
Ala Gly Asp Met Asn Gly Leu Ser Pro Thr Gln Ala Leu Pro Pro Pro
        515                 520                 525
Leu Ser Met Pro Ser Thr Ser Gln Cys Thr Pro Pro Pro Pro Tyr Pro
    530                 535                 540
Thr Asp Cys Ser Ile Val Ser Phe Leu Ala Arg Leu Gly Cys Ser Ser
545                 550                 555                 560
Cys Leu Asp Tyr Phe Thr Thr Gln Gly Leu Thr Thr Ile Tyr Gln Ile
                565                 570                 575
Glu His Tyr Ser Met Asp Asp Leu Ala Ser Leu Lys Ile Pro Glu Gln
            580                 585                 590
Phe Arg His Ala Ile Trp Lys Gly Ile Leu Asp His Arg Gln Leu His
        595                 600                 605
Glu Phe Ser Ser Pro Ser His Leu Leu Arg Thr Pro Ser Ser Ala Ser
    610                 615                 620
```

```
Thr Val Ser Val Gly Ser Ser Glu Thr Arg Gly Glu Arg Val Ile Asp
625                 630                 635                 640
Ala Val Arg Phe Thr Leu Arg Gln Thr Ile Ser Phe Pro Pro Arg Asp
                645                 650                 655
Glu Trp Asn Asp Phe Asn Phe Asp Met Asp Ala Arg Arg Asn Lys Gln
            660                 665                 670
Gln Arg Ile Lys Glu Glu Gly Glu
        675                 680
```

<210> 343
<211> 461
<212> PRT
<213> Homo sapiens

<400> 343

```
Met Leu Tyr Leu Glu Asn Asn Ala Gln Thr Gln Phe Ser Glu Pro Gln
 1               5                  10                  15
Tyr Thr Asn Leu Gly Leu Leu Asn Ser Met Asp Gln Gln Ile Gln Asn
            20                  25                  30
Gly Ser Ser Ser Thr Ser Pro Tyr Asn Thr Asp His Ala Gln Asn Ser
        35                  40                  45
Val Thr Ala Pro Ser Pro Tyr Ala Gln Pro Ser Ser Thr Phe Asp Ala
    50                  55                  60
Leu Ser Pro Ser Pro Ala Ile Pro Ser Asn Thr Asp Tyr Pro Gly Pro
65                  70                  75                  80
His Ser Phe Asp Val Ser Phe Gln Gln Ser Ser Thr Ala Lys Ser Ala
                85                  90                  95
Thr Trp Thr Tyr Ser Thr Glu Leu Lys Lys Leu Tyr Cys Gln Ile Ala
            100                 105                 110
Lys Thr Cys Pro Ile Gln Ile Lys Val Met Thr Pro Pro Pro Gln Gly
        115                 120                 125
Ala Val Ile Arg Ala Met Pro Val Tyr Lys Lys Ala Glu His Val Thr
    130                 135                 140
Glu Val Val Lys Arg Cys Pro Asn His Glu Leu Ser Arg Glu Phe Asn
145                 150                 155                 160
Glu Gly Gln Ile Ala Pro Pro Ser His Leu Ile Arg Val Glu Gly Asn
                165                 170                 175
Ser His Ala Gln Tyr Val Glu Asp Pro Ile Thr Gly Arg Gln Ser Val
            180                 185                 190
Leu Val Pro Tyr Glu Pro Pro Gln Val Gly Thr Glu Phe Thr Thr Val
        195                 200                 205
Leu Tyr Asn Phe Met Cys Asn Ser Ser Cys Val Gly Gly Met Asn Arg
    210                 215                 220
Arg Pro Ile Leu Ile Ile Val Thr Leu Glu Thr Arg Asp Gly Gln Val
225                 230                 235                 240
Leu Gly Arg Arg Cys Phe Glu Ala Arg Ile Cys Ala Cys Pro Gly Arg
                245                 250                 255
Asp Arg Lys Ala Asp Glu Asp Ser Ile Arg Lys Gln Gln Val Ser Asp
            260                 265                 270
Ser Thr Lys Asn Gly Asp Gly Thr Lys Arg Pro Phe Arg Gln Asn Thr
        275                 280                 285
His Gly Ile Gln Met Thr Ser Ile Lys Lys Arg Arg Ser Pro Asp Asp
    290                 295                 300
```

```
Glu Leu Leu Tyr Leu Pro Val Arg Gly Arg Glu Thr Tyr Glu Met Leu
305                 310                 315                 320
Leu Lys Ile Lys Glu Ser Leu Glu Leu Met Gln Tyr Leu Pro Gln His
                325                 330                 335
Thr Ile Glu Thr Tyr Arg Gln Gln Gln Gln Gln Gln His Gln His Leu
            340                 345                 350
Leu Gln Lys Gln Thr Ser Ile Gln Ser Pro Ser Ser Tyr Gly Asn Ser
        355                 360                 365
Ser Pro Pro Leu Asn Lys Met Asn Ser Met Asn Lys Leu Pro Ser Val
    370                 375                 380
Ser Gln Leu Ile Asn Pro Gln Gln Arg Asn Ala Leu Thr Pro Thr Thr
385                 390                 395                 400
Ile Pro Asp Gly Met Gly Ala Asn Ile Pro Met Met Gly Thr His Met
                405                 410                 415
Pro Met Ala Gly Asp Met Asn Gly Leu Ser Pro Thr Gln Ala Leu Pro
            420                 425                 430
Pro Pro Leu Ser Met Pro Ser Thr Ser His Cys Thr Pro Pro Pro Pro
        435                 440                 445
Tyr Pro Thr Asp Cys Ser Ile Val Arg Ile Trp Gln Val
    450                 455                 460
```

<210> 344
<211> 516
<212> PRT
<213> Homo sapiens

<400> 344

```
Met Ser Gln Ser Thr Gln Thr Asn Glu Phe Leu Ser Pro Glu Val Phe
 1               5                  10                  15
Gln His Ile Trp Asp Phe Leu Glu Gln Pro Ile Cys Ser Val Gln Pro
            20                  25                  30
Ile Asp Leu Asn Phe Val Asp Glu Pro Ser Glu Asp Gly Ala Thr Asn
        35                  40                  45
Lys Ile Glu Ile Ser Met Asp Cys Ile Arg Met Gln Asp Ser Asp Leu
    50                  55                  60
Ser Asp Pro Met Trp Pro Gln Tyr Thr Asn Leu Gly Leu Leu Asn Ser
65                  70                  75                  80
Met Asp Gln Gln Ile Gln Asn Gly Ser Ser Ser Thr Ser Pro Tyr Asn
                85                  90                  95
Thr Asp His Ala Gln Asn Ser Val Thr Ala Pro Ser Pro Tyr Ala Gln
            100                 105                 110
Pro Ser Ser Thr Phe Asp Ala Leu Ser Pro Ser Pro Ala Ile Pro Ser
        115                 120                 125
Asn Thr Asp Tyr Pro Gly Pro His Ser Phe Asp Val Ser Phe Gln Gln
    130                 135                 140
Ser Ser Thr Ala Lys Ser Ala Thr Trp Thr Tyr Ser Thr Glu Leu Lys
145                 150                 155                 160
Lys Leu Tyr Cys Gln Ile Ala Lys Thr Cys Pro Ile Gln Ile Lys Val
                165                 170                 175
Met Thr Pro Pro Pro Gln Gly Ala Val Ile Arg Ala Met Pro Val Tyr
            180                 185                 190
Lys Lys Ala Glu His Val Thr Glu Val Val Lys Arg Cys Pro Asn His
        195                 200                 205
```

```
Glu Leu Ser Arg Glu Phe Asn Glu Gly Gln Ile Ala Pro Pro Ser His
    210                 215                 220
Leu Ile Arg Val Glu Gly Asn Ser His Ala Gln Tyr Val Glu Asp Pro
225                 230                 235                 240
Ile Thr Gly Arg Gln Ser Val Leu Val Pro Tyr Glu Pro Pro Gln Val
                245                 250                 255
Gly Thr Glu Phe Thr Thr Val Leu Tyr Asn Phe Met Cys Asn Ser Ser
            260                 265                 270
Cys Val Gly Gly Met Asn Arg Arg Pro Ile Leu Ile Ile Val Thr Leu
        275                 280                 285
Glu Thr Arg Asp Gly Gln Val Leu Gly Arg Arg Cys Phe Glu Ala Arg
    290                 295                 300
Ile Cys Ala Cys Pro Gly Arg Asp Arg Lys Ala Asp Glu Asp Ser Ile
305                 310                 315                 320
Arg Lys Gln Gln Val Ser Asp Ser Thr Lys Asn Gly Asp Gly Thr Lys
                325                 330                 335
Arg Pro Phe Arg Gln Asn Thr His Gly Ile Gln Met Thr Ser Ile Lys
            340                 345                 350
Lys Arg Arg Ser Pro Asp Asp Glu Leu Leu Tyr Leu Pro Val Arg Gly
        355                 360                 365
Arg Glu Thr Tyr Glu Met Leu Leu Lys Ile Lys Glu Ser Leu Glu Leu
    370                 375                 380
Met Gln Tyr Leu Pro Gln His Thr Ile Glu Thr Tyr Arg Gln Gln Gln
385                 390                 395                 400
Gln Gln Gln His Gln His Leu Leu Gln Lys Gln Thr Ser Ile Gln Ser
                405                 410                 415
Pro Ser Ser Tyr Gly Asn Ser Ser Pro Pro Leu Asn Lys Met Asn Ser
            420                 425                 430
Met Asn Lys Leu Pro Ser Val Ser Gln Leu Ile Asn Pro Gln Gln Arg
        435                 440                 445
Asn Ala Leu Thr Pro Thr Thr Ile Pro Asp Gly Met Gly Ala Asn Ile
    450                 455                 460
Pro Met Met Gly Thr His Met Pro Met Ala Gly Asp Met Asn Gly Leu
465                 470                 475                 480
Ser Pro Thr Gln Ala Leu Pro Pro Pro Leu Ser Met Pro Ser Thr Ser
                485                 490                 495
His Cys Thr Pro Pro Pro Pro Tyr Pro Thr Asp Cys Ser Ile Val Arg
            500                 505                 510
Ile Trp Gln Val
        515
```

<210> 345
<211> 1800
<212> DNA
<213> Homo sapiens

<400> 345
gcgcctcatt gccactgcag tgactaaagc tgggaagacg ctggtcagtt cacctgcccc 60
actggttgtt ttttaaacaa attctgatac aggcgacatc ctcactgacc gagcaaagat 120
tgacattcgt atcatcactg tgcaccattg gcttctaggc actccagtgg ggtaggagaa 180
ggaggtctga aaccctcgca gagggatctt gccctcattc tttgggtctg aaacactggc 240
agtcgttgga aacaggactc agggataaac cagcgcaatg gattggggga cgctgcacac 300
tttcatcggg ggtgtcaaca aacactccac cagcatcggg aaggtgtgga tcacagtcat 360

```
ctttattttc cgagtcatga tcctagtggt ggctgcccag gaagtgtggg gtgacgagca 420
agaggacttc gtctgcaaca cactgcaacc gggatgcaaa aatgtgtgct atgaccactt 480
tttcccggtg tcccacatcc ggctgtgggc cctccagctg atcttcgtct ccaccccagc 540
gctgctggtg gccatgcatg tggcctacta caggcacgaa accactcgca agttcaggcg 600
aggagagaag aggaatgatt tcaaagacat agaggacatt aaaaagcaca aggttcggat 660
agaggggtcg ctgtggtgga cgtacaccag cagcatcttt ttccgaatca tctttgaagc 720
agcctttatg tatgtgtttt acttccttta caatgggtac cacctgccct gggtgttgaa 780
atgtgggatt gacccctgcc ccaaccttgt tgactgcttt atttctaggc caacagagaa 840
gaccgtgttt accatttta tgatttctgc gtctgtgatt tgcatgctgc ttaacgtggc 900
agagttgtgc tacctgctgc tgaaagtgtg ttttaggaga tcaaagagag cacagacgca 960
aaaaaatcac cccaatcatg ccctaaagga gagtaagcag aatgaaatga atgagctgat 1020
ttcagatagt ggtcaaaatg caatcacagg tttcccaagc taaacatttc aaggtaaaat 1080
gtagctgcgt cataaggaga cttctgtctt ctccagaagg caataccaac ctgaaagttc 1140
cttctgtagc ctgaagagtt tgtaaatgac tttcataata aatagacact tgagttaact 1200
ttttgtagga tacttgctcc attcatacac aacgtaatca aatatgtggt ccatctctga 1260
aaacaagaga ctgcttgaca aaggagcatt gcagtcactt tgacaggttc cttttaagtg 1320
gactctctga caaagtgggt actttctgaa aatttatata actgttgttg ataaggaaca 1380
tttatccagg aattgatacg tttattagga aaagatattt ttataggctt ggatgttttt 1440
agttccgact ttgaatttat ataaagtatt tttataatga ctggtcttcc ttacctggaa 1500
aaacatgcga tgttagtttt agaattacac cacaagtatc taaatttcca acttacaaag 1560
ggtcctatct tgtaaatatt gttttgcatt gtctgttggc aaatttgtga actgtcatga 1620
tacgcttaag gtgggaaagt gttcattgca caatatattt ttactgcttt ctgaatgtag 1680
acggaacagt gtggaagcag aaggcttttt taactcatcc gtttggccga tcgttgcaga 1740
ccactgggag atgtggatgt ggttgcctcc ttttgctcgt ccccgtggct taacccttct 1800
```

<210> 346
<211> 261
<212> PRT
<213> Homo sapiens

<400> 346

```
Met Asp Trp Gly Thr Leu His Thr Phe Ile Gly Gly Val Asn Lys His
 1               5                  10                  15
Ser Thr Ser Ile Gly Lys Val Trp Ile Thr Val Ile Phe Ile Phe Arg
            20                  25                  30
Val Met Ile Leu Val Val Ala Ala Gln Glu Val Trp Gly Asp Glu Gln
        35                  40                  45
Glu Asp Phe Val Cys Asn Thr Leu Gln Pro Gly Cys Lys Asn Val Cys
    50                  55                  60
Tyr Asp His Phe Phe Pro Val Ser His Ile Arg Leu Trp Ala Leu Gln
65                  70                  75                  80
Leu Ile Phe Val Ser Thr Pro Ala Leu Leu Val Ala Met His Val Ala
                85                  90                  95
Tyr Tyr Arg His Glu Thr Thr Arg Lys Phe Arg Arg Gly Glu Lys Arg
            100                 105                 110
Asn Asp Phe Lys Asp Ile Glu Asp Ile Lys Lys His Lys Val Arg Ile
        115                 120                 125
Glu Gly Ser Leu Trp Trp Thr Tyr Thr Ser Ser Ile Phe Phe Arg Ile
    130                 135                 140
Ile Phe Glu Ala Ala Phe Met Tyr Val Phe Tyr Phe Leu Tyr Asn Gly
145                 150                 155                 160
Tyr His Leu Pro Trp Val Leu Lys Cys Gly Ile Asp Pro Cys Pro Asn
                165                 170                 175
```

```
Leu Val Asp Cys Phe Ile Ser Arg Pro Thr Glu Lys Thr Val Phe Thr
            180                 185                 190
Ile Phe Met Ile Ser Ala Ser Val Ile Cys Met Leu Leu Asn Val Ala
        195                 200                 205
Glu Leu Cys Tyr Leu Leu Leu Lys Val Cys Phe Arg Arg Ser Lys Arg
    210                 215                 220
Ala Gln Thr Gln Lys Asn His Pro Asn His Ala Leu Lys Glu Ser Lys
225                 230                 235                 240
Gln Asn Glu Met Asn Glu Leu Ile Ser Asp Ser Gly Gln Asn Ala Ile
                245                 250                 255
Thr Gly Phe Pro Ser
            260
```

<210> 347
<211> 1740
<212> DNA
<213> Homo sapiens

<400> 347

```
atgaacaaac tgtatatcgg aaacctcagc gagaacgccg ccccctcgga cctagaaagt 60
atcttcaagg acgccaagat cccggtgtcg ggacccttcc tggtgaagac tggctacgcg 120
ttcgtggact gcccggacga gagctgggcc ctcaaggcca tcgaggcgct ttcaggtaaa 180
atagaactgc acgggaaacc catagaagtt gagcactcgg tcccaaaaag gcaaaggatt 240
cggaaacttc agatacgaaa tatcccgcct catttacagt gggaggtgct ggatagttta 300
ctagtccagt atggagtggt ggagagctgt gagcaagtga acactgactc ggaaactgca 360
gttgtaaatg taacctattc cagtaaggac caagctagac aagcactaga caaactgaat 420
ggatttcagt tagagaattt caccttgaaa gtagcctata tccctgatga aacggccgcc 480
cagcaaaacc ccttgcagca gccccgaggt cgccgggggc ttgggcagag gggctcctca 540
aggcaggggt ctccaggatc cgtatccaag cagaaaccat gtgatttgcc tctgcgcctg 600
ctggttccca cccaatttgt tggagccatc ataggaaaag aaggtgccac cattcggaac 660
atcaccaaac agacccagtc taaaatcgat gtccaccgta aagaaaatgc gggggctgct 720
gagaagtcga ttactatcct ctctactcct gaaggcacct ctgcggcttg taagtctatt 780
ctggagatta tgcataagga agctcaagat ataaaattca cagaagagat ccccttgaag 840
attttagctc ataataactt tgttggacgt cttattggta aagaaggaag aaatcttaaa 900
aaaattgagc aagacacaga cactaaaatc acgatatctc cattgcagga attgacgctg 960
tataatccag aacgcactat tacagttaaa ggcaatgttg agacatgtgc caaagctgag 1020
gaggagatca tgaagaaaat cagggagtct tatgaaaatg atattgcttc tatgaatctt 1080
caagcacatt taattcctgg attaaatctg aacgccttgg gtctgttccc acccacttca 1140
gggatgccac ctcccacctc agggcccccc tcagccatga ctcctcccta cccgcagttt 1200
gagcaatcag aaacggagac tgttcatctg tttatcccag ctctatcagt cggtgccatc 1260
atcggcaagc agggccagca catcaagcag ctttctcgct ttgctggagc ttcaattaag 1320
attgctccag cggaagcacc agatgctaaa gtgaggatgg tgattatcac tggaccacca 1380
gaggctcagt tcaaggctca gggaagaatt tatggaaaaa ttaaagaaga aaactttgtt 1440
agtcctaaag aagaggtgaa acttgaagct catatcagag tgccatcctt tgctgctggc 1500
agagttattg gaaaaggagg caaaacggtg aatgaacttc agaatttgtc aagtgcagaa 1560
gttgttgtcc ctcgtgacca gacacctgat gagaatgacc aagtggttgt caaaataact 1620
ggtcacttct atgcttgcca ggttgcccag agaaaaattc aggaaattct gactcaggta 1680
aagcagcacc aacaacagaa ggctctgcaa agtggaccac ctcagtcaag acggaagtaa 1740
```

<210> 348
<211> 579
<212> PRT

<213> Homo sapiens

<400> 348

```
Met Asn Lys Leu Tyr Ile Gly Asn Leu Ser Glu Asn Ala Ala Pro Ser
 1               5                  10                  15
Asp Leu Glu Ser Ile Phe Lys Asp Ala Lys Ile Pro Val Ser Gly Pro
            20                  25                  30
Phe Leu Val Lys Thr Gly Tyr Ala Phe Val Asp Cys Pro Asp Glu Ser
        35                  40                  45
Trp Ala Leu Lys Ala Ile Glu Ala Leu Ser Gly Lys Ile Glu Leu His
    50                  55                  60
Gly Lys Pro Ile Glu Val Glu His Ser Val Pro Lys Arg Gln Arg Ile
65                  70                  75                  80
Arg Lys Leu Gln Ile Arg Asn Ile Pro Pro His Leu Gln Trp Glu Val
                85                  90                  95
Leu Asp Ser Leu Leu Val Gln Tyr Gly Val Val Glu Ser Cys Glu Gln
            100                 105                 110
Val Asn Thr Asp Ser Glu Thr Ala Val Val Asn Val Thr Tyr Ser Ser
        115                 120                 125
Lys Asp Gln Ala Arg Gln Ala Leu Asp Lys Leu Asn Gly Phe Gln Leu
    130                 135                 140
Glu Asn Phe Thr Leu Lys Val Ala Tyr Ile Pro Asp Glu Thr Ala Ala
145                 150                 155                 160
Gln Gln Asn Pro Leu Gln Gln Pro Arg Gly Arg Arg Gly Leu Gly Gln
                165                 170                 175
Arg Gly Ser Ser Arg Gln Gly Ser Pro Gly Ser Val Ser Lys Gln Lys
            180                 185                 190
Pro Cys Asp Leu Pro Leu Arg Leu Leu Val Pro Thr Gln Phe Val Gly
        195                 200                 205
Ala Ile Ile Gly Lys Glu Gly Ala Thr Ile Arg Asn Ile Thr Lys Gln
    210                 215                 220
Thr Gln Ser Lys Ile Asp Val His Arg Lys Glu Asn Ala Gly Ala Ala
225                 230                 235                 240
Glu Lys Ser Ile Thr Ile Leu Ser Thr Pro Glu Gly Thr Ser Ala Ala
                245                 250                 255
Cys Lys Ser Ile Leu Glu Ile Met His Lys Glu Ala Gln Asp Ile Lys
            260                 265                 270
Phe Thr Glu Glu Ile Pro Leu Lys Ile Leu Ala His Asn Asn Phe Val
        275                 280                 285
Gly Arg Leu Ile Gly Lys Glu Gly Arg Asn Leu Lys Lys Ile Glu Gln
    290                 295                 300
Asp Thr Asp Thr Lys Ile Thr Ile Ser Pro Leu Gln Glu Leu Thr Leu
305                 310                 315                 320
Tyr Asn Pro Glu Arg Thr Ile Thr Val Lys Gly Asn Val Glu Thr Cys
                325                 330                 335
Ala Lys Ala Glu Glu Glu Ile Met Lys Lys Ile Arg Glu Ser Tyr Glu
            340                 345                 350
Asn Asp Ile Ala Ser Met Asn Leu Gln Ala His Leu Ile Pro Gly Leu
        355                 360                 365
Asn Leu Asn Ala Leu Gly Leu Phe Pro Pro Thr Ser Gly Met Pro Pro
    370                 375                 380
Pro Thr Ser Gly Pro Pro Ser Ala Met Thr Pro Pro Tyr Pro Gln Phe
385                 390                 395                 400
Glu Gln Ser Glu Thr Glu Thr Val His Leu Phe Ile Pro Ala Leu Ser
```

```
                405                 410                 415
Val Gly Ala Ile Ile Gly Lys Gln Gly Gln His Ile Lys Gln Leu Ser
            420                 425                 430
Arg Phe Ala Gly Ala Ser Ile Lys Ile Ala Pro Ala Glu Ala Pro Asp
        435                 440                 445
Ala Lys Val Arg Met Val Ile Ile Thr Gly Pro Pro Glu Ala Gln Phe
    450                 455                 460
Lys Ala Gln Gly Arg Ile Tyr Gly Lys Ile Lys Glu Glu Asn Phe Val
465                 470                 475                 480
Ser Pro Lys Glu Glu Val Lys Leu Glu Ala His Ile Arg Val Pro Ser
                485                 490                 495
Phe Ala Ala Gly Arg Val Ile Gly Lys Gly Gly Lys Thr Val Asn Glu
            500                 505                 510
Leu Gln Asn Leu Ser Ser Ala Glu Val Val Val Pro Arg Asp Gln Thr
        515                 520                 525
Pro Asp Glu Asn Asp Gln Val Val Val Lys Ile Thr Gly His Phe Tyr
    530                 535                 540
Ala Cys Gln Val Ala Gln Arg Lys Ile Gln Glu Ile Leu Thr Gln Val
545                 550                 555                 560
Lys Gln His Gln Gln Gln Lys Ala Leu Gln Ser Gly Pro Pro Gln Ser
                565                 570                 575
Arg Arg Lys
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<210> 349
<211> 207
<212> DNA
<213> Homo sapiens

<400> 349
atgtggcagc ccctcttctt caagtggctc ttgtcctgtt gccctgggag ttctcaaatt 60
gctgcagcag cctccaccca gcctgaggat gacatcaata cacagaggaa gaagagtcag 120
gaaaagatga gagaagttac agactctcct gggcgacccc gagagcttac cattcctcag 180
acttcttcac atggtgctaa cagattt 207

<210> 350
<211> 69
<212> PRT
<213> Homo sapiens

<400> 350

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Met Trp Gln Pro Leu Phe Phe Lys Trp Leu Leu Ser Cys Cys Pro Gly
 1               5                  10                  15
Ser Ser Gln Ile Ala Ala Ala Ala Ser Thr Gln Pro Glu Asp Asp Ile
            20                  25                  30
Asn Thr Gln Arg Lys Lys Ser Gln Glu Lys Met Arg Glu Val Thr Asp
        35                  40                  45
Ser Pro Gly Arg Pro Arg Glu Leu Thr Ile Pro Gln Thr Ser Ser His
    50                  55                  60
Gly Ala Asn Arg Phe
65
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<210> 351
<211> 1012
<212> DNA
<213> Homo sapiens

<400> 351
ccctctagaa ataattttgt ttaactttaa gaaggagata tacatatgca tcaccatcac 60
catcacacgg ccgcgtccga taacttccag ctgtcccagg gtgggcaggg attcgccatt 120
ccgatcgggc aggcgatggc gatcgcgggc cagatcaagc ttcccaccgt tcatatcggg 180
cctaccgcct tcctcggctt gggtgttgtc gacaacaacg gcaacggcgc acgagtccaa 240
cgcgtggtcg ggagcgctcc ggcggcaagt ctcggcatct ccaccggcga cgtgatcacc 300
gcggtcgacg gcgctccgat caactcggcc accgcgatgg cggacgcgct taacgggcat 360
catcccggtg acgtcatctc ggtgacctgg caaaccaagt cgggcggcac gcgtacaggg 420
aacgtgacat tggccgaggg acccccggcc gaattcatgg attgggggac gctgcacact 480
ttcatcgggg gtgtcaacaa acactccacc agcatcggga aggtgtggat cacagtcatc 540
tttattttcc gagtcatgat cctcgtggtg gctgcccagg aagtgtgggg tgacgagcaa 600
gaggacttcg tctgcaacac actgcaaccg ggatgcaaaa atgtgtgcta tgaccacttt 660
ttcccggtgt cccacatccg gctgtgggcc ctccagctga tcttcgtctc caccccagcg 720
ctgctggtgg ccatgcatgt ggcctactac aggcacgaaa ccactcgcaa gttcaggcga 780
ggagagaaga ggaatgattt caaagacata gaggacatta aaaagcagaa ggttcggata 840
gaggggtgac tcgagcacca ccaccaccac cactgagatc cggctgctaa caaagcccga 900
aaggaagctg agttggctgc tgccaccgct gagcaataac tagcataacc ccttggggcc 960
tctaaacggg tcttgagggg ttttttgctg aaaggaggaa ctatatccgg at 1012

<210> 352
<211> 267
<212> PRT
<213> Homo sapiens

<400> 352
Met His His His His His His Thr Ala Ala Ser Asp Asn Phe Gln Leu
 1   5   10   15
Ser Gln Gly Gly Gln Gly Phe Ala Ile Pro Ile Gly Gln Ala Met Ala
            20   25   30
Ile Ala Gly Gln Ile Lys Leu Pro Thr Val His Ile Gly Pro Thr Ala
        35   40   45
Phe Leu Gly Leu Gly Val Val Asp Asn Asn Gly Asn Gly Ala Arg Val
    50   55   60
Gln Arg Val Val Gly Ser Ala Pro Ala Ala Ser Leu Gly Ile Ser Thr
65   70   75   80
Gly Asp Val Ile Thr Ala Val Asp Gly Ala Pro Ile Asn Ser Ala Thr
                85   90   95
Ala Met Ala Asp Ala Leu Asn Gly His His Pro Gly Asp Val Ile Ser
            100   105   110
Val Thr Trp Gln Thr Lys Ser Gly Gly Thr Arg Thr Gly Asn Val Thr
        115   120   125
Leu Ala Glu Gly Pro Pro Ala Glu Phe Met Asp Trp Gly Thr Leu His
    130   135   140
Thr Phe Ile Gly Gly Val Asn Lys His Ser Thr Ser Ile Gly Lys Val
145   150   155   160
Trp Ile Thr Val Ile Phe Ile Phe Arg Val Met Ile Leu Val Val Ala
                165   170   175
Ala Gln Glu Val Trp Gly Asp Glu Gln Glu Asp Phe Val Cys Asn Thr
            180   185   190

```
Leu Gln Pro Gly Cys Lys Asn Val Cys Tyr Asp His Phe Phe Pro Val
        195                 200                 205
Ser His Ile Arg Leu Trp Ala Leu Gln Leu Ile Phe Val Ser Thr Pro
    210                 215                 220
Ala Leu Leu Val Ala Met His Val Ala Tyr Tyr Arg His Glu Thr Thr
225                 230                 235                 240
Arg Lys Phe Arg Arg Gly Glu Lys Arg Asn Asp Phe Lys Asp Ile Glu
                245                 250                 255
Asp Ile Lys Lys Gln Lys Val Arg Ile Glu Gly
            260                 265
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<210> 353
<211> 900
<212> DNA
<213> Homo sapiens

<400> 353
atgcatcacc atcaccatca cacggccgcg tccgataact tccagctgtc ccagggtggg 60
cagggattcg ccattccgat cgggcaggcg atggcgatcg cgggccagat caagcttccc 120
accgttcata tcgggcctac cgccttcctc ggcttgggtg ttgtcgacaa caacggcaac 180
ggcgcacgag tccaacgcgt ggtcgggagc gctccggcgg caagtctcgg catctccacc 240
ggcgacgtga tcaccgcggt cgacggcgct ccgatcaact cggccaccgc gatggcggac 300
gcgcttaacg ggcatcatcc cggtgacgtc atctcggtga cctggcaaac caagtcgggc 360
ggcacgcgta cagggaacgt gacattggcc gagggacccc cggccgaatt ccacgaaacc 420
actcgcaagt tcaggcgagg agagaagagg aatgatttca aagacataga ggacattaaa 480
aagcagaagg ttcggataga ggggtcgctg tggtggacgt acaccagcag catcttttttc 540
cgaatcatct ttgaagcagc ctttatgtat gtgttttact tcctttacaa tgggtaccac 600
ctgccctggg tgttgaaatg tgggattgac ccctgcccca accttgttga ctgctttatt 660
tctaggccaa cagagaagac cgtgtttacc atttttatga tttctgcgtc tgtgatttgc 720
atgctgctta acgtggcaga gttgtgctac ctgctgctga aagtgtgttt taggagatca 780
aagagagcac agacgcaaaa aaatcacccc aatcatgccc taaaggagag taagcagaat 840
gaaatgaatg agctgatttc agatagtggt caaaatgcaa tcacaggttt cccaagctaa 900

<210> 354
<211> 299
<212> PRT
<213> Homo sapiens

<400> 354
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Met His His His His His His Thr Ala Ala Ser Asp Asn Phe Gln Leu
 1               5                  10                  15
Ser Gln Gly Gly Gln Gly Phe Ala Ile Pro Ile Gly Gln Ala Met Ala
            20                  25                  30
Ile Ala Gly Gln Ile Lys Leu Pro Thr Val His Ile Gly Pro Thr Ala
        35                  40                  45
Phe Leu Gly Leu Gly Val Val Asp Asn Asn Gly Asn Gly Ala Arg Val
    50                  55                  60
Gln Arg Val Val Gly Ser Ala Pro Ala Ala Ser Leu Gly Ile Ser Thr
65                  70                  75                  80
Gly Asp Val Ile Thr Ala Val Asp Gly Ala Pro Ile Asn Ser Ala Thr
                85                  90                  95
Ala Met Ala Asp Ala Leu Asn Gly His His Pro Gly Asp Val Ile Ser
```

```
            100                 105                 110
Val Thr Trp Gln Thr Lys Ser Gly Gly Thr Arg Thr Gly Asn Val Thr
        115                 120                 125
Leu Ala Glu Gly Pro Pro Ala Glu Phe His Glu Thr Thr Arg Lys Phe
    130                 135                 140
Arg Arg Gly Glu Lys Arg Asn Asp Phe Lys Asp Ile Glu Asp Ile Lys
145                 150                 155                 160
Lys Gln Lys Val Arg Ile Glu Gly Ser Leu Trp Trp Thr Tyr Thr Ser
                165                 170                 175
Ser Ile Phe Phe Arg Ile Ile Phe Glu Ala Ala Phe Met Tyr Val Phe
            180                 185                 190
Tyr Phe Leu Tyr Asn Gly Tyr His Leu Pro Trp Val Leu Lys Cys Gly
        195                 200                 205
Ile Asp Pro Cys Pro Asn Leu Val Asp Cys Phe Ile Ser Arg Pro Thr
    210                 215                 220
Glu Lys Thr Val Phe Thr Ile Phe Met Ile Ser Ala Ser Val Ile Cys
225                 230                 235                 240
Met Leu Leu Asn Val Ala Glu Leu Cys Tyr Leu Leu Leu Lys Val Cys
                245                 250                 255
Phe Arg Arg Ser Lys Arg Ala Gln Thr Gln Lys Asn His Pro Asn His
            260                 265                 270
Ala Leu Lys Glu Ser Lys Gln Asn Glu Met Asn Glu Leu Ile Ser Asp
        275                 280                 285
Ser Gly Gln Asn Ala Ile Thr Gly Phe Pro Ser
    290                 295
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<210> 355
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 355
ggagtacagc ttcaagacaa tggg 24

<210> 356
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 356
ccatgggaat tcattataat aattttgttc c 31

<210> 357
<211> 920
<212> PRT
<213> Homo sapiens

<400> 357
Met Gln His His His His His His Gly Val Gln Leu Gln Asp Asn Gly
 1   5   10   15
Tyr Asn Gly Leu Leu Ile Ala Ile Asn Pro Gln Val Pro Glu Asn Gln
            20   25   30
Asn Leu Ile Ser Asn Ile Lys Glu Met Ile Thr Glu Ala Ser Phe Tyr
        35   40   45
Leu Phe Asn Ala Thr Lys Arg Arg Val Phe Phe Arg Asn Ile Lys Ile
    50   55   60
Leu Ile Pro Ala Thr Trp Lys Ala Asn Asn Asn Ser Lys Ile Lys Gln
65   70   75   80
Glu Ser Tyr Glu Lys Ala Asn Val Ile Val Thr Asp Trp Tyr Gly Ala
                85   90   95
His Gly Asp Asp Pro Tyr Thr Leu Gln Tyr Arg Gly Cys Gly Lys Glu
            100   105   110
Gly Lys Tyr Ile His Phe Thr Pro Asn Phe Leu Leu Asn Asp Asn Leu
        115   120   125
Thr Ala Gly Tyr Gly Ser Arg Gly Arg Val Phe Val His Glu Trp Ala
    130   135   140
His Leu Arg Trp Gly Val Phe Asp Glu Tyr Asn Asn Asp Lys Pro Phe
145   150   155   160
Tyr Ile Asn Gly Gln Asn Gln Ile Lys Val Thr Arg Cys Ser Ser Asp
                165   170   175
Ile Thr Gly Ile Phe Val Cys Glu Lys Gly Pro Cys Pro Gln Glu Asn
            180   185   190
Cys Ile Ile Ser Lys Leu Phe Lys Glu Gly Cys Thr Phe Ile Tyr Asn
        195   200   205
Ser Thr Gln Asn Ala Thr Ala Ser Ile Met Phe Met Gln Ser Leu Ser
    210   215   220
Ser Val Val Glu Phe Cys Asn Ala Ser Thr His Asn Gln Glu Ala Pro
225   230   235   240
Asn Leu Gln Asn Gln Met Cys Ser Leu Arg Ser Ala Trp Asp Val Ile
                245   250   255
Thr Asp Ser Ala Asp Phe His His Ser Phe Pro Met Asn Gly Thr Glu
            260   265   270
Leu Pro Pro Pro Pro Thr Phe Ser Leu Val Glu Ala Gly Asp Lys Val
        275   280   285
Val Cys Leu Val Leu Asp Val Ser Ser Lys Met Ala Glu Ala Asp Arg
    290   295   300
Leu Leu Gln Leu Gln Gln Ala Ala Glu Phe Tyr Leu Met Gln Ile Val
305   310   315   320
Glu Ile His Thr Phe Val Gly Ile Ala Ser Phe Asp Ser Lys Gly Glu
                325   330   335
Ile Arg Ala Gln Leu His Gln Ile Asn Ser Asn Asp Asp Arg Lys Leu
            340   345   350
Leu Val Ser Tyr Leu Pro Thr Thr Val Ser Ala Lys Thr Asp Ile Ser
        355   360   365
Ile Cys Ser Gly Leu Lys Lys Gly Phe Glu Val Val Glu Lys Leu Asn
    370   375   380
Gly Lys Ala Tyr Gly Ser Val Met Ile Leu Val Thr Ser Gly Asp Asp
385   390   395   400
Lys Leu Leu Gly Asn Cys Leu Pro Thr Val Leu Ser Ser Gly Ser Thr
                405   410   415
Ile His Ser Ile Ala Leu Gly Ser Ser Ala Ala Pro Asn Leu Glu Glu

```
            420                 425                 430
Leu Ser Arg Leu Thr Gly Gly Leu Lys Phe Phe Val Pro Asp Ile Ser
        435                 440                 445
Asn Ser Asn Ser Met Ile Asp Ala Phe Ser Arg Ile Ser Ser Gly Thr
    450                 455                 460
Gly Asp Ile Phe Gln Gln His Ile Gln Leu Glu Ser Thr Gly Glu Asn
465                 470                 475                 480
Val Lys Pro His His Gln Leu Lys Asn Thr Val Thr Val Asp Asn Thr
                485                 490                 495
Val Gly Asn Asp Thr Met Phe Leu Val Thr Trp Gln Ala Ser Gly Pro
            500                 505                 510
Pro Glu Ile Ile Leu Phe Asp Pro Asp Gly Arg Lys Tyr Tyr Thr Asn
        515                 520                 525
Asn Phe Ile Thr Asn Leu Thr Phe Arg Thr Ala Ser Leu Trp Ile Pro
    530                 535                 540
Gly Thr Ala Lys Pro Gly His Trp Thr Tyr Thr Leu Asn Asn Thr His
545                 550                 555                 560
His Ser Leu Gln Ala Leu Lys Val Thr Val Thr Ser Arg Ala Ser Asn
                565                 570                 575
Ser Ala Val Pro Pro Ala Thr Val Glu Ala Phe Val Glu Arg Asp Ser
            580                 585                 590
Leu His Phe Pro His Pro Val Met Ile Tyr Ala Asn Val Lys Gln Gly
        595                 600                 605
Phe Tyr Pro Ile Leu Asn Ala Thr Val Thr Ala Thr Val Glu Pro Glu
    610                 615                 620
Thr Gly Asp Pro Val Thr Leu Arg Leu Leu Asp Asp Gly Ala Gly Ala
625                 630                 635                 640
Asp Val Ile Lys Asn Asp Gly Ile Tyr Ser Arg Tyr Phe Phe Ser Phe
                645                 650                 655
Ala Ala Asn Gly Arg Tyr Ser Leu Lys Val His Val Asn His Ser Pro
            660                 665                 670
Ser Ile Ser Thr Pro Ala His Ser Ile Pro Gly Ser His Ala Met Tyr
        675                 680                 685
Val Pro Gly Tyr Thr Ala Asn Gly Asn Ile Gln Met Asn Ala Pro Arg
    690                 695                 700
Lys Ser Val Gly Arg Asn Glu Glu Glu Arg Lys Trp Gly Phe Ser Arg
705                 710                 715                 720
Val Ser Ser Gly Gly Ser Phe Ser Val Leu Gly Val Pro Ala Gly Pro
                725                 730                 735
His Pro Asp Val Phe Pro Pro Cys Lys Ile Ile Asp Leu Glu Ala Val
            740                 745                 750
Lys Val Glu Glu Glu Leu Thr Leu Ser Trp Thr Ala Pro Gly Glu Asp
        755                 760                 765
Phe Asp Gln Gly Gln Ala Thr Ser Tyr Glu Ile Arg Met Ser Lys Ser
    770                 775                 780
Leu Gln Asn Ile Gln Asp Asp Phe Asn Asn Ala Ile Leu Val Asn Thr
785                 790                 795                 800
Ser Lys Arg Asn Pro Gln Gln Ala Gly Ile Arg Glu Ile Phe Thr Phe
                805                 810                 815
Ser Pro Gln Ile Ser Thr Asn Gly Pro Glu His Gln Pro Asn Gly Glu
            820                 825                 830
Thr His Glu Ser His Arg Ile Tyr Val Ala Ile Arg Ala Met Asp Arg
        835                 840                 845
Asn Ser Leu Gln Ser Ala Val Ser Asn Ile Ala Gln Ala Pro Leu Phe
```

```
    850                 855                 860
Ile Pro Pro Asn Ser Asp Pro Val Pro Ala Arg Asp Tyr Leu Ile Leu
865                 870                 875                 880
Lys Gly Val Leu Thr Ala Met Gly Leu Ile Gly Ile Ile Cys Leu Ile
                885                 890                 895
Ile Val Val Thr His His Thr Leu Ser Arg Lys Lys Arg Ala Asp Lys
            900                 905                 910
Lys Glu Asn Gly Thr Lys Leu Leu
        915                 920
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<210> 358
<211> 2773
<212> DNA
<213> Homo sapiens

<400> 358

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catatgcagc atcaccacca tcaccacgga gtacagcttc aagacaatgg gtataatgga 60
ttgctcattg caattaatcc tcaggtacct gagaatcaga acctcatctc aaacattaag 120
gaaatgataa ctgaagcttc attttaccta tttaatgcta ccaagagaag agtatttttc 180
agaaatataa agattttaat acctgccaca tggaaagcta ataataacag caaaataaaa 240
caagaatcat atgaaaaggc aaatgtcata gtgactgact ggtatggggc acatggagat 300
gatccataca ccctacaata cagagggtgt ggaaaagagg gaaaatacat tcatttcaca 360
cctaatttcc tactgaatga taacttaaca gctggctacg gatcacgagg ccgagtgttt 420
gtccatgaat gggcccacct ccgttggggt gtgttcgatg agtataacaa tgacaaacct 480
ttctacataa atgggcaaaa tcaaattaaa gtgacaaggt gttcatctga catcacaggc 540
atttttgtgt gtgaaaaagg tccttgcccc caagaaaact gtattattag taagcttttt 600
aaagaaggat gcacctttat ctacaatagc acccaaaatg caactgcatc aataatgttc 660
atgcaaagtt tatcttctgt ggttgaattt tgtaatgcaa gtacccacaa ccaagaagca 720
ccaaacctac agaaccagat gtgcagcctc agaagtgcat gggatgtaat cacagactct 780
gctgactttc accacagctt tcccatgaac gggactgagc ttccacctcc tcccacattc 840
tcgcttgtag aggctggtga caaagtggtc tgtttagtgc tggatgtgtc cagcaagatg 900
gcagaggctg acagactcct tcaactacaa caagccgcag aattttattt gatgcagatt 960
gttgaaattc ataccttcgt gggcattgcc agtttcgaca gcaaaggaga gatcagagcc 1020
cagctacacc aaattaacag caatgatgat cgaaagttgc tggtttcata tctgcccacc 1080
actgtatcag ctaaaacaga catcagcatt tgttcagggc ttaagaaagg atttgaggtg 1140
gttgaaaaac tgaatggaaa agcttatggc tctgtgatga tattagtgac cagcggagat 1200
gataagcttc ttggcaattg cttacccact gtgctcagca gtggttcaac aattcactcc 1260
attgccctgg gttcatctgc agccccaaat ctggaggaat tatcacgtct tacaggaggt 1320
ttaaagttct ttgttccaga tatatcaaac tccaatagca tgattgatgc tttcagtaga 1380
atttcctctg gaactggaga cattttccag caacatattc agcttgaaag tacaggtgaa 1440
aatgtcaaac ctcaccatca attgaaaaac acagtgactg tggataatac tgtgggcaac 1500
gacactatgt ttctagttac gtggcaggcc agtggtcctc ctgagattat attatttgat 1560
cctgatggac gaaaatacta cacaaataat tttatcacca atctaacttt tcggacagct 1620
agtctttgga ttccaggaac agctaagcct gggcactgga cttacaccct gaacaatacc 1680
catcattctc tgcaagccct gaaagtgaca gtgacctctc gcgcctccaa ctcagctgtg 1740
cccccagcca ctgtggaagc ctttgtggaa agagacagcc tccattttcc tcatcctgtg 1800
atgatttatg ccaatgtgaa acagggattt tatcccattc ttaatgccac tgtcactgcc 1860
acagttgagc cagagactgg agatcctgtt acgctgagac tccttgatga tggagcaggt 1920
gctgatgtta taaaaaatga tggaatttac tcgaggtatt ttttctcctt tgctgcaaat 1980
ggtagatata gcttgaaagt gcatgtcaat cactctccca gcataagcac cccagcccac 2040
tctattccag ggagtcatgc tatgtatgta ccaggttaca cagcaaacgg taatattcag 2100
atgaatgctc caaggaaatc agtaggcaga aatgaggagg agcgaaagtg gggctttagc 2160
cgagtcagct caggaggctc cttttcagtg ctgggagttc agctggccc ccaccctgat 2220
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gtgtttccac catgcaaaat tattgacctg gaagctgtaa aagtagaaga ggaattgacc 2280
ctatcttgga cagcacctgg agaagacttt gatcagggcc aggctacaag ctatgaaata 2340
agaatgagta aaagtctaca gaatatccaa gatgacttta acaatgctat tttagtaaat 2400
acatcaaagc gaaatcctca gcaagctggc atcagggaga tatttacgtt ctcaccccaa 2460
atttccacga atggacctga acatcagcca aatggagaaa cacatgaaag ccacagaatt 2520
tatgttgcaa tacgagcaat ggataggaac tccttacagt ctgctgtatc taacattgcc 2580
caggcgcctc tgtttattcc ccccaattct gatcctgtac ctgccagaga ttatcttata 2640
ttgaaaggag ttttaacagc aatgggtttg ataggaatca tttgccttat tatagttgtg 2700
acacatcata ctttaagcag gaaaaagaga gcagacaaga aagagaatgg aacaaaatta 2760
ttataatgaa ttc 2773

<210> 359
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 359
tggcagcccc tcttcttcaa gtggc 25

<210> 360
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 360
cgccagaatt catcaaacaa atctgttagc acc 33

<210> 361
<211> 77
<212> PRT
<213> Homo sapiens

<400> 361
Met Gln His His His His His His Trp Gln Pro Leu Phe Phe Lys Trp
 1   5   10   15
Leu Leu Ser Cys Cys Pro Gly Ser Ser Gln Ile Ala Ala Ala Ala Ser
            20   25   30
Thr Gln Pro Glu Asp Asp Ile Asn Thr Gln Arg Lys Lys Ser Gln Glu
        35   40   45
Lys Met Arg Glu Val Thr Asp Ser Pro Gly Arg Pro Arg Glu Leu Thr
    50   55   60
Ile Pro Gln Thr Ser Ser His Gly Ala Asn Arg Phe Val
65   70   75

<210> 362
<211> 244
<212> DNA

<213> Homo sapiens

<400> 362
catatgcagc atcaccacca tcaccactgg cagcccctct tcttcaagtg gctcttgtcc 60
tgttgccctg ggagttctca aattgctgca gcagcctcca cccagcctga ggatgacatc 120
aatacacaga ggaagaagag tcaggaaaag atgagagaag ttacagactc tcctgggcga 180
ccccgagagc ttaccattcc tcagacttct tcacatggtg ctaacagatt tgtttgatga 240
attc 244

<210> 363
<211> 20
<212> PRT
<213> Homo sapiens

<400> 363
Met Trp Gln Pro Leu Phe Phe Lys Trp Leu Leu Ser Cys Cys Pro Gly
 1 5 10 15
Ser Ser Gln Ile
 20

<210> 364
<211> 60
<212> DNA
<213> Homo sapiens

<400> 364
atgtggcagc ccctcttctt caagtggctc ttgtcctgtt gccctgggag ttctcaaatt 60

<210> 365
<211> 20
<212> PRT
<213> Homo sapiens

<400> 365
Gly Ser Ser Gln Ile Ala Ala Ala Ala Ser Thr Gln Pro Glu Asp Asp
 1 5 10 15
Ile Asn Thr Gln
 20

<210> 366
<211> 60
<212> DNA
<213> Homo sapiens

<400> 366
gggagttctc aaattgctgc agcagcctcc acccagcctg aggatgacat caatacacag 60

<210> 367
<211> 20
<212> PRT

<213> Homo sapiens

<400> 367
Lys Pro Gly His Trp Thr Tyr Thr Leu Asn Asn Thr His His Ser Leu
 1   5   10   15
Gln Ala Leu Lys
            20

<210> 368
<211> 2343
<212> DNA
<213> Homo sapiens

<400> 368
attccggagc gtttgcggct tcgcttcatg gccgctctcc cgcccctcct gggatctgtg 60
gggagctggg gagcccgcag cggcccggag ccggagctgg cgagccgagc ggagacctgt 120
gcgccgcgcc tctgaggcgc agcatgtgaa gcggagacgg catccagtgg ggggcgagcc 180
tctcagccgg ccgggatggc taccacggcc gagctcttcg aggagccttt tgtggcagat 240
gaatatattg aacgtcttgt atggagaacc ccaggaggag gctctagagg tggacctgaa 300
gcttttgatc ctaaaagatt attagaagaa tttgtaaatc atattcagga actccagata 360
atggatgaaa ggattcagag gaaagtagag aaactagagc aacaatgtca gaaagaagcc 420
aaggaatttg ccaagaaggt acaagagctg cagaaaagca atcaggttgc cttccaacat 480
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tactttaatg agtttctaga tggagaattg aaatctgatg tttttacaaa ttctgaaaag 660
ataaaggaag cagcagacat cattcagaag ttgcacctaa ttgcccaaga gttacctttt 720
gatagatttt cagaagttaa atccaaaatt gcaagtaaat accatgattt agaatgccag 780
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gcagcagttt tacttcattt taagggttat tcccattgtg ttgatgttta tataaagcag 900
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aagaaaacag attttaagcc agaagatgaa aacaatgttt tgattcaata tactaatgcc 1920
tgtgtaaaag tctgtgctta cgtaagaaaa caagtggaga agattaaaaa ttccatggat 1980
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gccgaatata ggaagtgtgc caaagacttc aagattccaa tggtattaca tctttttgat 2160
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tcaggagaac aacttgctaa tctggacaag aatatacttc actccttcgt acaacttcgt 2280
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att 2343

<210> 369
<211> 708
<212> PRT
<213> Homo sapiens

<400> 369

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Met Ala Thr Thr Ala Glu Leu Phe Glu Glu Pro Phe Val Ala Asp Glu
 1               5                  10                  15
Tyr Ile Glu Arg Leu Val Trp Arg Thr Pro Gly Gly Gly Ser Arg Gly
            20                  25                  30
Gly Pro Glu Ala Phe Asp Pro Lys Arg Leu Leu Glu Glu Phe Val Asn
        35                  40                  45
His Ile Gln Glu Leu Gln Ile Met Asp Glu Arg Ile Gln Arg Lys Val
    50                  55                  60
Glu Lys Leu Glu Gln Gln Cys Gln Lys Glu Ala Lys Glu Phe Ala Lys
65                  70                  75                  80
Lys Val Gln Glu Leu Gln Lys Ser Asn Gln Val Ala Phe Gln His Phe
                85                  90                  95
Gln Glu Leu Asp Glu His Ile Ser Tyr Val Ala Thr Lys Val Cys His
            100                 105                 110
Leu Gly Asp Gln Leu Glu Gly Val Asn Thr Pro Arg Gln Arg Ala Val
        115                 120                 125
Glu Ala Gln Lys Leu Met Lys Tyr Phe Asn Glu Phe Leu Asp Gly Glu
    130                 135                 140
Leu Lys Ser Asp Val Phe Thr Asn Ser Glu Lys Ile Lys Glu Ala Ala
145                 150                 155                 160
Asp Ile Ile Gln Lys Leu His Leu Ile Ala Gln Glu Leu Pro Phe Asp
                165                 170                 175
Arg Phe Ser Glu Val Lys Ser Lys Ile Ala Ser Lys Tyr His Asp Leu
            180                 185                 190
Glu Cys Gln Leu Ile Gln Glu Phe Thr Ser Ala Gln Arg Arg Gly Glu
        195                 200                 205
Ile Ser Arg Met Arg Glu Val Ala Ala Val Leu Leu His Phe Lys Gly
    210                 215                 220
Tyr Ser His Cys Val Asp Val Tyr Ile Lys Gln Cys Gln Glu Gly Ala
225                 230                 235                 240
Tyr Leu Arg Asn Asp Ile Phe Glu Asp Ala Gly Ile Leu Cys Gln Arg
                245                 250                 255
Val Asn Lys Gln Val Gly Asp Ile Phe Ser Asn Pro Glu Thr Val Leu
            260                 265                 270
Ala Lys Leu Ile Gln Asn Val Phe Glu Ile Lys Leu Gln Ser Phe Val
        275                 280                 285
Lys Glu Gln Leu Glu Glu Cys Arg Lys Ser Asp Ala Glu Gln Tyr Leu
    290                 295                 300
Lys Asn Leu Tyr Asp Leu Tyr Thr Arg Thr Thr Asn Leu Ser Ser Lys
305                 310                 315                 320
Leu Met Glu Phe Asn Leu Gly Thr Asp Lys Gln Thr Phe Leu Ser Lys
                325                 330                 335
Leu Ile Lys Ser Ile Phe Ile Ser Tyr Leu Glu Asn Tyr Ile Glu Val
            340                 345                 350
Glu Thr Gly Tyr Leu Lys Ser Arg Ser Ala Met Ile Leu Gln Arg Tyr
        355                 360                 365
```

```
Tyr Asp Ser Lys Asn His Gln Lys Arg Ser Ile Gly Thr Gly Gly Ile
    370                 375                 380
Gln Asp Leu Lys Glu Arg Ile Arg Gln Arg Thr Asn Leu Pro Leu Gly
385                 390                 395                 400
Pro Ser Ile Asp Thr His Gly Glu Thr Phe Leu Ser Gln Glu Val Val
                405                 410                 415
Val Asn Leu Leu Gln Glu Thr Lys Gln Ala Phe Glu Arg Cys His Arg
            420                 425                 430
Leu Ser Asp Pro Ser Asp Leu Pro Arg Asn Ala Phe Arg Ile Phe Thr
        435                 440                 445
Ile Leu Val Glu Phe Leu Cys Ile Glu His Ile Asp Tyr Ala Leu Glu
    450                 455                 460
Thr Gly Leu Ala Gly Ile Pro Ser Ser Asp Ser Arg Asn Ala Asn Leu
465                 470                 475                 480
Tyr Phe Leu Asp Val Val Gln Gln Ala Asn Thr Ile Phe His Leu Phe
                485                 490                 495
Asp Lys Gln Phe Asn Asp His Leu Met Pro Leu Ile Ser Ser Ser Pro
            500                 505                 510
Lys Leu Ser Glu Cys Leu Gln Lys Lys Lys Glu Ile Ile Glu Gln Met
        515                 520                 525
Glu Met Lys Leu Asp Thr Gly Ile Asp Arg Thr Leu Asn Cys Met Ile
    530                 535                 540
Gly Gln Met Lys His Ile Leu Ala Ala Glu Gln Lys Lys Thr Asp Phe
545                 550                 555                 560
Lys Pro Glu Asp Glu Asn Asn Val Leu Ile Gln Tyr Thr Asn Ala Cys
                565                 570                 575
Val Lys Val Cys Ala Tyr Val Arg Lys Gln Val Glu Lys Ile Lys Asn
            580                 585                 590
Ser Met Asp Gly Lys Asn Val Asp Thr Val Leu Met Glu Leu Gly Val
        595                 600                 605
Arg Phe His Arg Leu Ile Tyr Glu His Leu Gln Gln Tyr Ser Tyr Ser
    610                 615                 620
Cys Met Gly Gly Met Leu Ala Ile Cys Asp Val Ala Glu Tyr Arg Lys
625                 630                 635                 640
Cys Ala Lys Asp Phe Lys Ile Pro Met Val Leu His Leu Phe Asp Thr
                645                 650                 655
Leu His Ala Leu Cys Asn Leu Leu Val Val Ala Pro Asp Asn Leu Lys
            660                 665                 670
Gln Val Cys Ser Gly Glu Gln Leu Ala Asn Leu Asp Lys Asn Ile Leu
        675                 680                 685
His Ser Phe Val Gln Leu Arg Ala Asp Tyr Arg Ser Ala Arg Leu Ala
    690                 695                 700
Arg His Phe Ser
705
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<210> 370
<211> 60
<212> DNA
<213> Homo sapiens

<400> 370
gtcaatcact ctcccagcat aagcacccca gcccactcta ttccagggag tcatgctatg 60

<210> 371
<211> 60
<212> DNA
<213> Homo sapiens

<400> 371
agtagaattt cctctggaac tggagacatt ttccagcaac atattcagct tgaaagtaca 60

<210> 372
<211> 60
<212> DNA
<213> Homo sapiens

<400> 372
ccagagactg gagatcctgt tacgctgaga ctccttgatg atggagcagg tgctgatgtt 60

<210> 373
<211> 60
<212> DNA
<213> Homo sapiens

<400> 373
ttacagtctg ctgtatctaa cattgcccag gcgcctctgt ttattccccc caattctgat 60

<210> 374
<211> 60
<212> DNA
<213> Homo sapiens

<400> 374
gctgtgcccc cagccactgt ggaagccttt gtggaaagag acagcctcca ttttcctcat 60

<210> 375
<211> 60
<212> DNA
<213> Homo sapiens

<400> 375
aaaaacacag tgactgtgga taatactgtg ggcaacgaca ctatgtttct agttacgtgg 60

<210> 376
<211> 20
<212> PRT
<213> Homo sapiens

<400> 376
Leu Gln Ser Ala Val Ser Asn Ile Ala Gln Ala Pro Leu Phe Ile Pro
 1   5   10   15

Pro Asn Ser Asp
20

<210> 377
<211> 20
<212> PRT
<213> Homo sapiens

<400> 377
Val Asn His Ser Pro Ser Ile Ser Thr Pro Ala His Ser Ile Pro Gly
1 5 10 15
Ser His Ala Met
20

<210> 378
<211> 20
<212> PRT
<213> Homo sapiens

<400> 378
Pro Glu Thr Gly Asp Pro Val Thr Leu Arg Leu Leu Asp Asp Gly Ala
1 5 10 15
Gly Ala Asp Val
20

<210> 379
<211> 20
<212> PRT
<213> Homo sapiens

<400> 379
Ala Val Pro Pro Ala Thr Val Glu Ala Phe Val Glu Arg Asp Ser Leu
1 5 10 15
His Phe Pro His
20

<210> 380
<211> 20
<212> PRT
<213> Homo sapiens

<400> 380
Ser Arg Ile Ser Ser Gly Thr Gly Asp Ile Phe Gln Gln His Ile Gln
1 5 10 15
Leu Glu Ser Thr
20

<210> 381
<211> 20

<212> PRT
<213> Homo sapiens

<400> 381
Lys Asn Thr Val Thr Val Asp Asn Thr Val Gly Asn Asp Thr Met Phe
 1   5   10   15
Leu Val Thr Trp
            20

<210> 382
<211> 20
<212> PRT
<213> Homo sapiens

<400> 382
Lys Pro Gly His Trp Thr Tyr Thr Leu Asn Asn Thr His His Ser Leu
 1   5   10   15
Gln Ala Leu Lys
            20

<210> 383
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 383
cggcgaattc atggattggg ggacgctgc   29

<210> 384
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 384
cggcctcgag tcacccctct atccgaacct tctgc   35

<210> 385
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 385
cggcgaattc cacgaaccac tcgcaagttc ag   32

<210> 386
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 386
cggctcgagt tagcttgggc ctgtgattgc 30

<210> 387
<211> 20
<212> PRT
<213> Homo sapiens

<400> 387
Phe Phe Lys Trp Leu Leu Ser Cys Cys Pro Gly Ser Ser Gln Ile Ala
1 5 10 15
Ala Ala Ala Ser
20

<210> 388
<211> 19
<212> PRT
<213> Homo sapiens

<400> 388
Leu Ser Cys Cys Pro Gly Ser Ser Gln Ile Ala Ala Ala Ser Thr Gln
1 5 10 15
Pro Glu Asp

<210> 389
<211> 20
<212> PRT
<213> Homo sapiens

<400> 389
Ala Ala Ala Ala Ser Thr Gln Pro Glu Asp Asp Ile Asn Thr Gln Arg
1 5 10 15
Lys Lys Ser Gln
20

<210> 390
<211> 20
<212> PRT
<213> Homo sapiens

<400> 390

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Thr Gln Pro Glu Asp Asp Ile Asn Thr Gln Arg Lys Lys Ser Gln Glu
 1               5                  10                  15
Lys Met Arg Glu
            20


<210> 391
<211> 20
<212> PRT
<213> Homo sapiens

<400> 391
Asp Ile Asn Thr Gln Arg Lys Lys Ser Gln Glu Lys Met Arg Glu Val
 1               5                  10                  15
Thr Asp Ser Pro
            20


<210> 392
<211> 20
<212> PRT
<213> Homo sapiens

<400> 392
Arg Lys Lys Ser Gln Glu Lys Met Arg Glu Val Thr Asp Ser Pro Gly
 1               5                  10                  15
Arg Pro Arg Glu
            20


<210> 393
<211> 20
<212> PRT
<213> Homo sapiens

<400> 393
Glu Lys Met Arg Glu Val Thr Asp Ser Pro Gly Arg Pro Arg Glu Leu
 1               5                  10                  15
Thr Ile Pro Gln
            20


<210> 394
<211> 20
<212> PRT
<213> Homo sapiens

<400> 394
Val Thr Asp Ser Pro Gly Arg Pro Arg Glu Leu Thr Ile Pro Gln Thr
 1               5                  10                  15
Ser Ser His Gly
            20
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<210> 395
<211> 19
<212> PRT
<213> Homo sapiens

<400> 395
Gly Arg Pro Arg Glu Leu Thr Ile Pro Gln Thr Ser Ser His Gly Ala
 1   5   10   15
Asn Arg Phe

<210> 396
<211> 19
<212> PRT
<213> Homo sapiens

<400> 396
Met Asn Lys Leu Tyr Ile Gly Asn Leu Ser Glu Asn Ala Ala Pro Ser
 1   5   10   15
Asp Leu Glu

<210> 397
<211> 20
<212> PRT
<213> Homo sapiens

<400> 397
Ser Glu Asn Ala Ala Pro Ser Asp Leu Glu Ser Ile Phe Lys Asp Ala
 1   5   10   15
Lys Ile Pro Val
            20

<210> 398
<211> 20
<212> PRT
<213> Homo sapiens

<400> 398
Ser Ile Phe Lys Asp Ala Lys Ile Pro Val Ser Gly Pro Phe Leu Val
 1   5   10   15
Lys Thr Gly Tyr
            20

<210> 399
<211> 20
<212> PRT
<213> Homo sapiens

<400> 399

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Ser Gly Pro Phe Leu Val Lys Thr Gly Tyr Ala Phe Val Asp Cys Pro
 1               5                  10                  15
Asp Glu Ser Trp
            20
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<210> 400
<211> 20
<212> PRT
<213> Homo sapiens

<400> 400

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Ala Phe Val Asp Cys Pro Asp Glu Ser Trp Ala Leu Lys Ala Ile Glu
 1               5                  10                  15
Ala Leu Ser Gly
            20
```

<210> 401
<211> 20
<212> PRT
<213> Homo sapiens

<400> 401

```
Ala Leu Lys Ala Ile Glu Ala Leu Ser Gly Lys Ile Glu Leu His Gly
 1               5                  10                  15
Lys Pro Ile Glu
            20
```

<210> 402
<211> 20
<212> PRT
<213> Homo sapiens

<400> 402

```
Lys Ile Glu Leu His Gly Lys Pro Ile Glu Val Glu His Ser Val Pro
 1               5                  10                  15
Lys Arg Gln Arg
            20
```

<210> 403
<211> 20
<212> PRT
<213> Homo sapiens

<400> 403

```
Val Glu His Ser Val Pro Lys Arg Gln Arg Ile Arg Lys Leu Gln Ile
 1               5                  10                  15
Arg Asn Ile Pro
            20
```

<210> 404
<211> 20
<212> PRT
<213> Homo sapiens

<400> 404
Ile Arg Lys Leu Gln Ile Arg Asn Ile Pro Pro His Leu Gln Trp Glu
 1   5   10   15
Val Leu Asp Ser
            20

<210> 405
<211> 20
<212> PRT
<213> Homo sapiens

<400> 405
Ala Val Val Asn Val Thr Tyr Ser Ser Lys Asp Gln Ala Arg Gln Ala
 1   5   10   15
Leu Asp Lys Leu
            20

<210> 406
<211> 20
<212> PRT
<213> Homo sapiens

<400> 406
Asp Gln Ala Arg Gln Ala Leu Asp Lys Leu Asn Gly Phe Gln Leu Glu
 1   5   10   15
Asn Phe Thr Leu
            20

<210> 407
<211> 20
<212> PRT
<213> Homo sapiens

<400> 407
Asn Gly Phe Gln Leu Glu Asn Phe Thr Leu Lys Val Ala Tyr Ile Pro
 1   5   10   15
Asp Glu Thr Ala
            20

<210> 408
<211> 20
<212> PRT
<213> Homo sapiens

<400> 408

```
Lys Val Ala Tyr Ile Pro Asp Glu Thr Ala Ala Gln Gln Asn Pro Leu
 1               5                  10                  15
Gln Gln Pro Arg
            20


<210> 409
<211> 20
<212> PRT
<213> Homo sapiens

<400> 409
Ala Gln Gln Asn Pro Leu Gln Gln Pro Arg Gly Arg Arg Gly Leu Gly
 1               5                  10                  15
Gln Arg Gly Ser
            20


<210> 410
<211> 20
<212> PRT
<213> Homo sapiens

<400> 410
Gly Arg Arg Gly Leu Gly Gln Arg Gly Ser Ser Arg Gln Gly Ser Pro
 1               5                  10                  15
Gly Ser Val Ser
            20


<210> 411
<211> 20
<212> PRT
<213> Homo sapiens

<400> 411
Ser Arg Gln Gly Ser Pro Gly Ser Val Ser Lys Gln Lys Pro Cys Asp
 1               5                  10                  15
Leu Pro Leu Arg
            20


<210> 412
<211> 20
<212> PRT
<213> Homo sapiens

<400> 412
Lys Gln Lys Pro Cys Asp Leu Pro Leu Arg Leu Leu Val Pro Thr Gln
 1               5                  10                  15
Phe Val Gly Ala
            20
```

<210> 413
<211> 20
<212> PRT
<213> Homo sapiens

<400> 413
Leu Leu Val Pro Thr Gln Phe Val Gly Ala Ile Ile Gly Lys Glu Gly
1 5 10 15
Ala Thr Ile Arg
20

<210> 414
<211> 20
<212> PRT
<213> Homo sapiens

<400> 414
Ile Ile Gly Lys Glu Gly Ala Thr Ile Arg Asn Ile Thr Lys Gln Thr
1 5 10 15
Gln Ser Lys Ile
20

<210> 415
<211> 20
<212> PRT
<213> Homo sapiens

<400> 415
Asn Ile Thr Lys Gln Thr Gln Ser Lys Ile Asp Val His Arg Lys Glu
1 5 10 15
Asn Ala Gly Ala
20

<210> 416
<211> 20
<212> PRT
<213> Homo sapiens

<400> 416
Asp Val His Arg Lys Glu Asn Ala Gly Ala Ala Glu Lys Ser Ile Thr
1 5 10 15
Ile Leu Ser Thr
20

<210> 417
<211> 20
<212> PRT
<213> Homo sapiens

<400> 417

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Ala Glu Lys Ser Ile Thr Ile Leu Ser Thr Pro Glu Gly Thr Ser Ala
 1               5                  10                  15
Ala Cys Lys Ser
            20


<210> 418
<211> 20
<212> PRT
<213> Homo sapiens

<400> 418
Pro Glu Gly Thr Ser Ala Ala Cys Lys Ser Ile Leu Glu Ile Met His
 1               5                  10                  15
Lys Glu Ala Gln
            20


<210> 419
<211> 20
<212> PRT
<213> Homo sapiens

<400> 419
Ile Leu Glu Ile Met His Lys Glu Ala Gln Asp Ile Lys Phe Thr Glu
 1               5                  10                  15
Glu Ile Pro Leu
            20


<210> 420
<211> 455
<212> DNA
<213> Homo sapiens

<400> 420
gaagacatgc ttacttcccc ttcaccttcc ttcatgatgt gggaagagtg ctgcaaccca 60
gccctagcca acgccgcatg agagggagtg tgccgagggc ttctgagaag gtttctctca 120
catctagaaa gaagcgctta agatgtggca gcccctcttc ttcaagtggc tcttgtcctg 180
ttgccctggg agttctcaaa ttgctgcagc agcctccacc cagcctgagg atgacatcaa 240
tacacagagg aagaagagtc aggaaaagat gagagaagtt acagactctc ctgggcgacc 300
ccgagagctt accattcctc agacttcttc acatggtgct aacagatttg ttcctaaaag 360
taaagctcta gaggccgtca aattggcaat agaagccggg ttccaccata ttgattctgc 420
acatgtttac aataatgagg agcaggttgg actgg                           455

<210> 421
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 421
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actagtgtcc gcgtggcggc ctac 24

<210> 422
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 422
catgagaatt catcacatgc ccttgaaggc tccc 34

<210> 423
<211> 161
<212> PRT
<213> Homo sapiens

<400> 423
Met Gln His His His His His His His Thr Ser Val Arg Val Ala Ala
 1   5   10   15
Tyr Phe Glu Asn Phe Leu Ala Ala Trp Arg Pro Val Lys Ala Ser Asp
            20   25   30
Gly Asp Tyr Tyr Thr Leu Ala Val Pro Met Gly Asp Val Pro Met Asp
        35   40   45
Gly Ile Ser Val Ala Asp Ile Gly Ala Ala Val Ser Ser Ile Phe Asn
    50   55   60
Ser Pro Glu Glu Phe Leu Gly Lys Ala Val Gly Leu Ser Ala Glu Ala
65   70   75   80
Leu Thr Ile Gln Gln Tyr Ala Asp Val Leu Ser Lys Ala Leu Gly Lys
                85   90   95
Glu Val Arg Asp Ala Lys Ile Thr Pro Glu Ala Phe Glu Lys Leu Gly
            100   105   110
Phe Pro Ala Ala Lys Glu Ile Ala Asn Met Cys Arg Phe Tyr Glu Met
        115   120   125
Lys Pro Asp Arg Asp Val Asn Leu Thr His Gln Leu Asn Pro Lys Val
    130   135   140
Lys Ser Phe Ser Gln Phe Ile Ser Glu Asn Gln Gly Ala Phe Lys Gly
145   150   155   160
Met

<210> 424
<211> 489
<212> DNA
<213> Homo sapiens

<400> 424
atgcagcatc accaccatca ccaccacact agtgtccgcg tggcggccta ctttgaaaac 60
tttctcgcgg cgtggcggcc cgtgaaagcc tctgatggag attactacac cttggctgta 120
ccgatgggag atgtaccaat ggatggtatc tctgttgctg atattggagc agccgtctct 180
agcattttta attctccaga ggaattttta ggcaaggccg tggggctcag tgcagaagca 240
ctaacaatac agcaatatgc tgatgttttg tccaaggctt tggggaaaga agtccgagat 300

gcaaagatta ccccggaagc tttcgagaag ctgggattcc ctgcagcaaa ggaaatagcc 360
aatatgtgtc gtttctatga aatgaagcca gaccgagatg tcaatctcac ccaccaacta 420
aatcccaaag tcaaaagctt cagccagttt atctcagaga accagggagc cttcaagggc 480
atgtgatga 489

<210> 425
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 425
aacaaactgt atatcggaaa cctcagcgag aa 32

<210> 426
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 426
ccatagaatt cattacttcc gtcttgactg agg 33

<210> 427
<211> 586
<212> PRT
<213> Homo sapiens

<400> 427
Met Gln His His His His His His Asn Lys Leu Tyr Ile Gly Asn Leu
1 5 10 15
Ser Glu Asn Ala Ala Pro Ser Asp Leu Glu Ser Ile Phe Lys Asp Ala
20 25 30
Lys Ile Pro Val Ser Gly Pro Phe Leu Val Lys Thr Gly Tyr Ala Phe
35 40 45
Val Asp Cys Pro Asp Glu Ser Trp Ala Leu Lys Ala Ile Glu Ala Leu
50 55 60
Ser Gly Lys Ile Glu Leu His Gly Lys Pro Ile Glu Val Glu His Ser
65 70 75 80
Val Pro Lys Arg Gln Arg Ile Arg Lys Leu Gln Ile Arg Asn Ile Pro
85 90 95
Pro His Leu Gln Trp Glu Val Leu Asp Ser Leu Leu Val Gln Tyr Gly
100 105 110
Val Val Glu Ser Cys Glu Gln Val Asn Thr Asp Ser Glu Thr Ala Val
115 120 125
Val Asn Val Thr Tyr Ser Ser Lys Asp Gln Ala Arg Gln Ala Leu Asp
130 135 140
Lys Leu Asn Gly Phe Gln Leu Glu Asn Phe Thr Leu Lys Val Ala Tyr
145 150 155 160
Ile Pro Asp Glu Thr Ala Ala Gln Gln Asn Pro Leu Gln Gln Pro Arg

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                165                 170                 175
Gly Arg Arg Gly Leu Gly Gln Arg Gly Ser Ser Arg Gln Gly Ser Pro
            180                 185                 190
Gly Ser Val Ser Lys Gln Lys Pro Cys Asp Leu Pro Leu Arg Leu Leu
        195                 200                 205
Val Pro Thr Gln Phe Val Gly Ala Ile Ile Gly Lys Glu Gly Ala Thr
    210                 215                 220
Ile Arg Asn Ile Thr Lys Gln Thr Gln Ser Lys Ile Asp Val His Arg
225                 230                 235                 240
Lys Glu Asn Ala Gly Ala Ala Glu Lys Ser Ile Thr Ile Leu Ser Thr
                245                 250                 255
Pro Glu Gly Thr Ser Ala Ala Cys Lys Ser Ile Leu Glu Ile Met His
            260                 265                 270
Lys Glu Ala Gln Asp Ile Lys Phe Thr Glu Glu Ile Pro Leu Lys Ile
        275                 280                 285
Leu Ala His Asn Asn Phe Val Gly Arg Leu Ile Gly Lys Glu Gly Arg
    290                 295                 300
Asn Leu Lys Lys Ile Glu Gln Asp Thr Asp Thr Lys Ile Thr Ile Ser
305                 310                 315                 320
Pro Leu Gln Glu Leu Thr Leu Tyr Asn Pro Glu Arg Thr Ile Thr Val
                325                 330                 335
Lys Gly Asn Val Glu Thr Cys Ala Lys Ala Glu Glu Glu Ile Met Lys
            340                 345                 350
Lys Ile Arg Glu Ser Tyr Glu Asn Asp Ile Ala Ser Met Asn Leu Gln
        355                 360                 365
Ala His Leu Ile Pro Gly Leu Asn Leu Asn Ala Leu Gly Leu Phe Pro
    370                 375                 380
Pro Thr Ser Gly Met Pro Pro Pro Thr Ser Gly Pro Pro Ser Ala Met
385                 390                 395                 400
Thr Pro Pro Tyr Pro Gln Phe Glu Gln Ser Glu Thr Glu Thr Val His
                405                 410                 415
Leu Phe Ile Pro Ala Leu Ser Val Gly Ala Ile Ile Gly Lys Gln Gly
            420                 425                 430
Gln His Ile Lys Gln Leu Ser Arg Phe Ala Gly Ala Ser Ile Lys Ile
        435                 440                 445
Ala Pro Ala Glu Ala Pro Asp Ala Lys Val Arg Met Val Ile Ile Thr
    450                 455                 460
Gly Pro Pro Glu Ala Gln Phe Lys Ala Gln Gly Arg Ile Tyr Gly Lys
465                 470                 475                 480
Ile Lys Glu Glu Asn Phe Val Ser Pro Lys Glu Glu Val Lys Leu Glu
                485                 490                 495
Ala His Ile Arg Val Pro Ser Phe Ala Ala Gly Arg Val Ile Gly Lys
            500                 505                 510
Gly Gly Lys Thr Val Asn Glu Leu Gln Asn Leu Ser Ser Ala Glu Val
        515                 520                 525
Val Val Pro Arg Asp Gln Thr Pro Asp Glu Asn Asp Gln Val Val Val
    530                 535                 540
Lys Ile Thr Gly His Phe Tyr Ala Cys Gln Val Ala Gln Arg Lys Ile
545                 550                 555                 560
Gln Glu Ile Leu Thr Gln Val Lys Gln His Gln Gln Gln Lys Ala Leu
                565                 570                 575
Gln Ser Gly Pro Pro Gln Ser Arg Arg Lys
            580                 585
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<210> 428
<211> 1764
<212> DNA
<213> Homo sapiens

<400> 428
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gccccctcgg acctagaaag tatcttcaag gacgccaaga tcccggtgtc gggacccttc 120
ctggtgaaga ctggctacgc gttcgtggac tgcccggacg agagctgggc cctcaaggcc 180
atcgaggcgc tttcaggtaa aatagaactg cacgggaaac ccatagaagt tgagcactcg 240
gtcccaaaaa ggcaaaggat tcggaaactt cagatacgaa atatcccgcc tcatttacag 300
tgggaggtgc tggatagttt actagtccag tatggagtgg tggagagctg tgagcaagtg 360
aacactgact cggaaactgc agttgtaaat gtaacctatt ccagtaagga ccaagctaga 420
caagcactag acaaactgaa tggatttcag ttagagaatt tcaccttgaa agtagcctat 480
atccctgatg aaacggccgc ccagcaaaac cccttgcagc agccccgagg tcgccggggg 540
cttgggcaga ggggctcctc aaggcagggg tctccaggat ccgtatccaa gcagaaacca 600
tgtgatttgc ctctgcgcct gctggttccc acccaatttg ttggagccat cataggaaaa 660
gaaggtgcca ccattcggaa catcaccaaa cagacccagt ctaaaatcga tgtccaccgt 720
aaagaaaatg cgggggctgc tgagaagtcg attactatcc tctctactcc tgaaggcacc 780
tctgcggctt gtaagtctat tctggagatt atgcataagg aagctcaaga tataaaattc 840
acagaagaga tccccttgaa gattttagct cataataact ttgttggacg tcttattggt 900
aaagaaggaa gaaatcttaa aaaaattgag caagacacag acactaaaat cacgatatct 960
ccattgcagg aattgacgct gtataatcca gaacgcacta ttacagttaa aggcaatgtt 1020
gagacatgtg ccaaagctga ggaggagatc atgaagaaaa tcagggagtc ttatgaaaat 1080
gatattgctt ctatgaatct tcaagcacat ttaattcctg gattaaatct gaacgccttg 1140
ggtctgttcc cacccacttc agggatgcca cctcccacct cagggccccc ttcagccatg 1200
actcctccct acccgcagtt tgagcaatca gaaacggaga ctgttcatct gtttatccca 1260
gctctatcag tcggtgccat catcggcaag cagggccagc acatcaagca gctttctcgc 1320
tttgctggag cttcaattaa gattgctcca gcggaagcac cagatgctaa agtgaggatg 1380
gtgattatca ctggaccacc agaggctcag ttcaaggctc agggaagaat ttatggaaaa 1440
attaaagaag aaaactttgt tagtcctaaa gaagaggtga aacttgaagc tcatatcaga 1500
gtgccatcct ttgctgctgg cagagttatt ggaaaaggag gcaaaacggt gaatgaactt 1560
cagaatttgt caagtgcaga agttgttgtc cctcgtgacc agacacctga tgagaatgac 1620
caagtggttg tcaaaataac tggtcacttc tatgcttgcc aggttgccca gagaaaaatt 1680
caggaaattc tgactcaggt aaagcagcac caacaacaga aggctctgca aagtggacca 1740
cctcagtcaa gacggaagta atga 1764

<210> 429
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 429
ccatggaatt cattatttca atataagata atctc 35

<210> 430
<211> 881
<212> PRT
<213> Homo sapiens

<400> 430

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Met Gln His His His His His His Gly Val Gln Leu Gln Asp Asn Gly
 1               5                  10                  15
Tyr Asn Gly Leu Leu Ile Ala Ile Asn Pro Gln Val Pro Glu Asn Gln
            20                  25                  30
Asn Leu Ile Ser Asn Ile Lys Glu Met Ile Thr Glu Ala Ser Phe Tyr
        35                  40                  45
Leu Phe Asn Ala Thr Lys Arg Arg Val Phe Phe Arg Asn Ile Lys Ile
    50                  55                  60
Leu Ile Pro Ala Thr Trp Lys Ala Asn Asn Asn Ser Lys Ile Lys Gln
65                  70                  75                  80
Glu Ser Tyr Glu Lys Ala Asn Val Ile Val Thr Asp Trp Tyr Gly Ala
                85                  90                  95
His Gly Asp Asp Pro Tyr Thr Leu Gln Tyr Arg Gly Cys Gly Lys Glu
            100                 105                 110
Gly Lys Tyr Ile His Phe Thr Pro Asn Phe Leu Leu Asn Asp Asn Leu
        115                 120                 125
Thr Ala Gly Tyr Gly Ser Arg Gly Arg Val Phe Val His Glu Trp Ala
    130                 135                 140
His Leu Arg Trp Gly Val Phe Asp Glu Tyr Asn Asn Asp Lys Pro Phe
145                 150                 155                 160
Tyr Ile Asn Gly Gln Asn Gln Ile Lys Val Thr Arg Cys Ser Ser Asp
                165                 170                 175
Ile Thr Gly Ile Phe Val Cys Glu Lys Gly Pro Cys Pro Gln Glu Asn
            180                 185                 190
Cys Ile Ile Ser Lys Leu Phe Lys Glu Gly Cys Thr Phe Ile Tyr Asn
        195                 200                 205
Ser Thr Gln Asn Ala Thr Ala Ser Ile Met Phe Met Gln Ser Leu Ser
    210                 215                 220
Ser Val Val Glu Phe Cys Asn Ala Ser Thr His Asn Gln Glu Ala Pro
225                 230                 235                 240
Asn Leu Gln Asn Gln Met Cys Ser Leu Arg Ser Ala Trp Asp Val Ile
                245                 250                 255
Thr Asp Ser Ala Asp Phe His His Ser Phe Pro Met Asn Gly Thr Glu
            260                 265                 270
Leu Pro Pro Pro Pro Thr Phe Ser Leu Val Glu Ala Gly Asp Lys Val
        275                 280                 285
Val Cys Leu Val Leu Asp Val Ser Ser Lys Met Ala Glu Ala Asp Arg
    290                 295                 300
Leu Leu Gln Leu Gln Gln Ala Ala Glu Phe Tyr Leu Met Gln Ile Val
305                 310                 315                 320
Glu Ile His Thr Phe Val Gly Ile Ala Ser Phe Asp Ser Lys Gly Glu
                325                 330                 335
Ile Arg Ala Gln Leu His Gln Ile Asn Ser Asn Asp Asp Arg Lys Leu
            340                 345                 350
Leu Val Ser Tyr Leu Pro Thr Thr Val Ser Ala Lys Thr Asp Ile Ser
        355                 360                 365
Ile Cys Ser Gly Leu Lys Lys Gly Phe Glu Val Val Glu Lys Leu Asn
    370                 375                 380
Gly Lys Ala Tyr Gly Ser Val Met Ile Leu Val Thr Ser Gly Asp Asp
385                 390                 395                 400
Lys Leu Leu Gly Asn Cys Leu Pro Thr Val Leu Ser Ser Gly Ser Thr
                405                 410                 415
Ile His Ser Ile Ala Leu Gly Ser Ser Ala Ala Pro Asn Leu Glu Glu
```

```
            420                 425                 430
Leu Ser Arg Leu Thr Gly Gly Leu Lys Phe Phe Val Pro Asp Ile Ser
        435                 440                 445
Asn Ser Asn Ser Met Ile Asp Ala Phe Ser Arg Ile Ser Ser Gly Thr
    450                 455                 460
Gly Asp Ile Phe Gln Gln His Ile Gln Leu Glu Ser Thr Gly Glu Asn
465                 470                 475                 480
Val Lys Pro His His Gln Leu Lys Asn Thr Val Thr Val Asp Asn Thr
                485                 490                 495
Val Gly Asn Asp Thr Met Phe Leu Val Thr Trp Gln Ala Ser Gly Pro
            500                 505                 510
Pro Glu Ile Ile Leu Phe Asp Pro Asp Gly Arg Lys Tyr Tyr Thr Asn
        515                 520                 525
Asn Phe Ile Thr Asn Leu Thr Phe Arg Thr Ala Ser Leu Trp Ile Pro
    530                 535                 540
Gly Thr Ala Lys Pro Gly His Trp Thr Tyr Thr Leu Asn Asn Thr His
545                 550                 555                 560
His Ser Leu Gln Ala Leu Lys Val Thr Val Thr Ser Arg Ala Ser Asn
                565                 570                 575
Ser Ala Val Pro Pro Ala Thr Val Glu Ala Phe Val Glu Arg Asp Ser
            580                 585                 590
Leu His Phe Pro His Pro Val Met Ile Tyr Ala Asn Val Lys Gln Gly
        595                 600                 605
Phe Tyr Pro Ile Leu Asn Ala Thr Val Thr Ala Thr Val Glu Pro Glu
    610                 615                 620
Thr Gly Asp Pro Val Thr Leu Arg Leu Leu Asp Asp Gly Ala Gly Ala
625                 630                 635                 640
Asp Val Ile Lys Asn Asp Gly Ile Tyr Ser Arg Tyr Phe Phe Ser Phe
                645                 650                 655
Ala Ala Asn Gly Arg Tyr Ser Leu Lys Val His Val Asn His Ser Pro
            660                 665                 670
Ser Ile Ser Thr Pro Ala His Ser Ile Pro Gly Ser His Ala Met Tyr
        675                 680                 685
Val Pro Gly Tyr Thr Ala Asn Gly Asn Ile Gln Met Asn Ala Pro Arg
    690                 695                 700
Lys Ser Val Gly Arg Asn Glu Glu Glu Arg Lys Trp Gly Phe Ser Arg
705                 710                 715                 720
Val Ser Ser Gly Gly Ser Phe Ser Val Leu Gly Val Pro Ala Gly Pro
                725                 730                 735
His Pro Asp Val Phe Pro Pro Cys Lys Ile Ile Asp Leu Glu Ala Val
            740                 745                 750
Lys Val Glu Glu Glu Leu Thr Leu Ser Trp Thr Ala Pro Gly Glu Asp
        755                 760                 765
Phe Asp Gln Gly Gln Ala Thr Ser Tyr Glu Ile Arg Met Ser Lys Ser
    770                 775                 780
Leu Gln Asn Ile Gln Asp Asp Phe Asn Asn Ala Ile Leu Val Asn Thr
785                 790                 795                 800
Ser Lys Arg Asn Pro Gln Gln Ala Gly Ile Arg Glu Ile Phe Thr Phe
                805                 810                 815
Ser Pro Gln Ile Ser Thr Asn Gly Pro Glu His Gln Pro Asn Gly Glu
            820                 825                 830
Thr His Glu Ser His Arg Ile Tyr Val Ala Ile Arg Ala Met Asp Arg
        835                 840                 845
Asn Ser Leu Gln Ser Ala Val Ser Asn Ile Ala Gln Ala Pro Leu Phe
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    850                 855                 860
Ile Pro Pro Asn Ser Asp Pro Val Pro Ala Arg Asp Tyr Leu Ile Leu
865                 870                 875                 880
Lys
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<210> 431
<211> 2646
<212> DNA
<213> Homo sapiens

<400> 431
atgcagcatc accaccatca ccacggagta cagcttcaag acaatgggta taatggattg 60
ctcattgcaa ttaatcctca ggtacctgag aatcagaacc tcatctcaaa cattaaggaa 120
atgataactg aagcttcatt ttacctattt aatgctacca agagaagagt atttttcaga 180
aatataaaga ttttaatacc tgccacatgg aaagctaata ataacagcaa aataaaacaa 240
gaatcatatg aaaaggcaaa tgtcatagtg actgactggt atggggcaca tggagatgat 300
ccatacaccc tacaatacag agggtgtgga aaagagggaa aatacattca tttcacacct 360
aatttcctac tgaatgataa cttaacagct ggctacggat cacgaggccg agtgtttgtc 420
catgaatggg cccacctccg ttggggtgtg ttcgatgagt ataacaatga caaacctttc 480
tacataaatg ggcaaaatca aattaaagtg acaaggtgtt catctgacat cacaggcatt 540
tttgtgtgtg aaaaaggtcc ttgcccccaa gaaaactgta ttattagtaa gctttttaaa 600
gaaggatgca cctttatcta caatagcacc caaaatgcaa ctgcatcaat aatgttcatg 660
caaagtttat cttctgtggt tgaatttgt aatgcaagta cccacaacca agaagcacca 720
aacctacaga accagatgtg cagcctcaga agtgcatggg atgtaatcac agactctgct 780
gactttcacc acagctttcc catgaacggg actgagcttc cacctcctcc cacattctcg 840
cttgtagagg ctggtgacaa agtggtctgt ttagtgctgg atgtgtccag caagatggca 900
gaggctgaca gactccttca actacaacaa gccgcagaat tttatttgat gcagattgtt 960
gaaattcata ccttcgtggg cattgccagt ttcgacagca aaggagagat cagagcccag 1020
ctacaccaaa ttaacagcaa tgatgatcga aagttgctgg tttcatatct gcccaccact 1080
gtatcagcta aaacagacat cagcatttgt tcagggctta agaaaggatt tgaggtggtt 1140
gaaaaactga atggaaaagc ttatggctct gtgatgatat tagtgaccag cggagatgat 1200
aagcttcttg gcaattgctt acccactgtg ctcagcagtg gttcaacaat tcactccatt 1260
gccctgggtt catctgcagc cccaaatctg gaggaattat cacgtcttac aggaggttta 1320
aagttctttg ttccagatat atcaaactcc aatagcatga ttgatgcttt cagtagaatt 1380
tcctctggaa ctggagacat tttccagcaa catattcagc ttgaaagtac aggtgaaaat 1440
gtcaaacctc accatcaatt gaaaaacaca gtgactgtgg ataatactgt gggcaacgac 1500
actatgtttc tagttacgtg gcaggccagt ggtcctcctg agattatatt atttgatcct 1560
gatggacgaa aatactacac aaataatttt atcaccaatc taacttttcg gacagctagt 1620
ctttggattc caggaacagc taagcctggg cactggactt acaccctgaa caatacccat 1680
cattctctgc aagccctgaa agtgacagtg acctctcgcg cctccaactc agctgtgccc 1740
ccagccactg tggaagcctt tgtggaaaga gacagcctcc attttcctca tcctgtgatg 1800
atttatgcca atgtgaaaca gggattttat cccattctta atgccactgt cactgccaca 1860
gttgagccag agactggaga tcctgttacg ctgagactcc ttgatgatgg agcaggtgct 1920
gatgttataa aaaatgatgg aatttactcg aggtattttt tctcctttgc tgcaaatggt 1980
agatatagct tgaaagtgca tgtcaatcac tctcccagca taagcacccc agcccactct 2040
attccaggga gtcatgctat gtatgtacca ggttacacag caaacggtaa tattcagatg 2100
aatgctccaa ggaaatcagt aggcagaaat gaggaggagc gaaagtgggg ctttagccga 2160
gtcagctcag gaggctcctt ttcagtgctg ggagttccag ctggccccca ccctgatgtg 2220
tttccaccat gcaaaattat tgacctggaa gctgtaaaag tagaagagga attgacccta 2280
tcttggacag cacctggaga agactttgat cagggccagg ctacaagcta tgaaataaga 2340
atgagtaaaa gtctacagaa tatccaagat gactttaaca atgctatttt agtaaataca 2400
tcaaagcgaa atcctcagca agctggcatc agggagatat ttacgttctc accccaaatt 2460

tccacgaatg gacctgaaca tcagccaaat ggagaaacac atgaaagcca cagaatttat 2520
gttgcaatac gagcaatgga taggaactcc ttacagtctg ctgtatctaa cattgcccag 2580
gcgcctctgt ttattccccc caattctgat cctgtacctg ccagagatta tcttatattg 2640
aaataa 2646

<210> 432
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 432
cgcctgctcg agtcattaat attcatcaga aaatgg 36

<210> 433
<211> 371
<212> PRT
<213> Homo sapiens

<400> 433
Met Gln His His His His His His Trp Gln Pro Leu Phe Phe Lys Trp
 1   5   10   15
Leu Leu Ser Cys Cys Pro Gly Ser Ser Gln Ile Ala Ala Ala Ala Ser
            20   25   30
Thr Gln Pro Glu Asp Asp Ile Asn Thr Gln Arg Lys Lys Ser Gln Glu
        35   40   45
Lys Met Arg Glu Val Thr Asp Ser Pro Gly Arg Pro Arg Glu Leu Thr
    50   55   60
Ile Pro Gln Thr Ser Ser His Gly Ala Asn Arg Phe Val Pro Lys Ser
65   70   75   80
Lys Ala Leu Glu Ala Val Lys Leu Ala Ile Glu Ala Gly Phe His His
                85   90   95
Ile Asp Ser Ala His Val Tyr Asn Asn Glu Glu Gln Val Gly Leu Ala
            100   105   110
Ile Arg Ser Lys Ile Ala Asp Gly Ser Val Lys Arg Glu Asp Ile Phe
        115   120   125
Tyr Thr Ser Lys Leu Trp Ser Asn Ser His Arg Pro Glu Leu Val Arg
    130   135   140
Pro Ala Leu Glu Arg Ser Leu Lys Asn Leu Gln Leu Asp Tyr Val Asp
145   150   155   160
Leu Tyr Leu Ile His Phe Pro Val Ser Val Lys Pro Gly Glu Glu Val
                165   170   175
Ile Pro Lys Asp Glu Asn Gly Lys Ile Leu Phe Asp Thr Val Asp Leu
            180   185   190
Cys Ala Thr Trp Glu Ala Met Glu Lys Cys Lys Asp Ala Gly Leu Ala
        195   200   205
Lys Ser Ile Gly Val Ser Asn Phe Asn His Arg Leu Leu Glu Met Ile
    210   215   220
Leu Asn Lys Pro Gly Leu Lys Tyr Lys Pro Val Cys Asn Gln Val Glu
225   230   235   240
Cys His Pro Tyr Phe Asn Gln Arg Lys Leu Leu Asp Phe Cys Lys Ser
                245   250   255

```
Lys Asp Ile Val Leu Val Ala Tyr Ser Ala Leu Gly Ser His Arg Glu
            260                 265                 270
Glu Pro Trp Val Asp Pro Asn Ser Pro Val Leu Leu Glu Asp Pro Val
        275                 280                 285
Leu Cys Ala Leu Ala Lys Lys His Lys Arg Thr Pro Ala Leu Ile Ala
    290                 295                 300
Leu Arg Tyr Gln Leu Gln Arg Gly Val Val Val Leu Ala Lys Ser Tyr
305                 310                 315                 320
Asn Glu Gln Arg Ile Arg Gln Asn Val Gln Val Phe Glu Phe Gln Leu
                325                 330                 335
Thr Ser Glu Glu Met Lys Ala Ile Asp Gly Leu Asn Arg Asn Val Arg
            340                 345                 350
Tyr Leu Thr Leu Asp Ile Phe Ala Gly Pro Pro Asn Tyr Pro Phe Ser
        355                 360                 365
Asp Glu Tyr
    370
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<210> 434
<211> 1119
<212> DNA
<213> Homo sapiens

<400> 434

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atgcagcatc accaccatca ccactggcag cccctcttct tcaagtggct cttgtcctgt      60
tgccctggga gttctcaaat tgctgcagca gcctccaccc agcctgagga tgacatcaat     120
acacagagga agaagagtca ggaaaagatg agagaagtta cagactctcc tgggcgaccc     180
cgagagctta ccattcctca gacttcttca catggtgcta acagatttgt tcctaaaagt     240
aaagctctag aggccgtcaa attggcaata gaagccgggt tccaccatat tgattctgca     300
catgtttaca ataatgagga gcaggttgga ctggccatcc gaagcaagat tgcagatggc     360
agtgtgaaga gagaagacat attctacact tcaaagcttt ggagcaattc ccatcgacca     420
gagttggtcc gaccagcctt ggaaaggtca ctgaaaaatc ttcaattgga ctatgttgac     480
ctctatctta ttcattttcc agtgtctgta aagccaggtg aggaagtgat cccaaaagat     540
gaaaatggaa aaatactatt tgacacagtg gatctctgtg ccacatggga ggccatggag     600
aagtgtaaag atgcaggatt ggccaagtcc atcggggtgt ccaacttcaa ccacaggctg     660
ctggagatga tcctcaacaa gccagggctc aagtacaagc ctgtctgcaa ccaggtggaa     720
tgtcatcctt acttcaacca gagaaaactg ctggatttct gcaagtcaaa agacattgtt     780
ctggttgcct atagtgctct gggatcccat cgagaagaac catgggtgga cccgaactcc     840
ccggtgctct tggaggaccc agtcctttgt gccttggcaa aaaagcacaa gcgaacccca     900
gccctgattg ccctgcgcta ccagctgcag cgtggggttg tggtcctggc caagagctac     960
aatgagcagc gcatcagaca gaacgtgcag gtgtttgaat tccagttgac ttcagaggag    1020
atgaaagcca tagatggcct aaacagaaat gtgcgatatt tgacccttga tatttttgct    1080
ggccccccta attatccatt ttctgatgaa tattaatga                           1119
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<210> 435
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 435

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ggatccgccg ccaccatgac atccattcga gctgta                              36
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<210> 436
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 436
gtcgactcag ctggaccaca gccgcag 27

<210> 437
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 437
ggatccgccg ccaccatgga ctcctggacc ttctgct 37

<210> 438
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 438
gtcgactcag aaatcctttc tcttgac 27

<210> 439
<211> 933
<212> DNA
<213> Homo sapiens

<400> 439
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gctggagtta tccagtcacc ccggcacgag gtgacagaga tgggacaaga agtgactctg 120
agatgtaaac caatttcagg acacgactac cttttctggt acagacagac catgatgcgg 180
ggactggagt tgctcattta ctttaacaac aacgttccga tagatgattc agggatgccc 240
gaggatcgat tctcagctaa gatgcctaat gcatcattct ccactctgaa gatccagccc 300
tcagaaccca gggactcagc tgtgtacttc tgtgccagca gtttagttgg agcaaacact 360
gaagctttct ttggacaagg caccagactc acagttgtag aggacctgaa caaggtgttc 420
ccacccgagg tcgctgtgtt tgagccatca gaagcagaga tctcccacac ccaaaaggcc 480
acactggtgt gcctggccac aggcttcttc cctgaccacg tggagctgag ctggtgggtg 540
aatgggaagg aggtgcacag tggggtcagc acggacccgc agcccctcaa ggagcagccc 600
gccctcaatg actccagata ctgcctgagc agccgcctga gggtctcggc caccttctgg 660
cagaaccccc gcaaccactt ccgctgtcaa gtccagttct acgggctctc ggagaatgac 720
gagtggaccc aggatagggc caaacccgtc acccagatcg tcagcgccga ggcctggggt 780
agagcagact gtggctttac ctcggtgtcc taccagcaag gggtcctgtc tgccaccatc 840

ctctatgaga tcctgctagg gaaggccacc ctgtatgctg tgctggtcag cgcccttgtg 900
ttgatggcca tggtcaagag aaaggatttc tga 933

<210> 440
<211> 822
<212> DNA
<213> Homo sapiens

<400> 440
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gagaatgtgg agcagcatcc ttcaaccctg agtgtccagg agggagacag cgctgttatc 120
aagtgtactt attcagacag tgcctcaaac tacttccctt ggtataagca agaacttgga 180
aaaagacctc agcttattat agacattcgt tcaaatgtgg gcgaaaagaa agaccaacga 240
attgctgtta cattgaacaa gacagccaaa catttctccc tgcacatcac agagacccaa 300
cctgaagact cggctgtcta cttctgtgca gcaagtatac tgaacaccgg taaccagttc 360
tattttggga cagggacaag tttgacggtc attccaaata tccagaaccc tgaccctgcc 420
gtgtaccagc tgagagactc taaatccagt gacaagtctg tctgcctatt caccgatttt 480
gattctcaaa caaatgtgtc acaaagtaag gattctgatg tgtatatcac agacaaaact 540
gtgctagaca tgaggtctat ggacttcaag agcaacagtg ctgtggcctg gagcaacaaa 600
tctgactttg catgtgcaaa cgccttcaac aacagcatta ttccagaaga caccttcttc 660
cccagcccag aaagttcctg tgatgtcaag ctggtcgaga aaagctttga aacagatacg 720
aacctaaact ttcaaaacct gtcagtgatt gggttccgaa tcctcctcct gaaagtggcc 780
gggtttaatc tgctcatgac gctgcggctg tggtccagct ga 822

<210> 441
<211> 2311
<212> DNA
<213> Homo sapiens

<400> 441
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gtctccctgt tctgtcctag ctatgttcct gtgttgtgtg cattcgtctt ttccagagca 180
aaccgcccag agtagaagat ggattggggc acgctgcaga cgatcctggg gggtgtgaac 240
aaacactcca ccagcattgg aaagatctgg ctcaccgtcc tcttcatttt tcgcattatg 300
atcctcgttg tggctgcaaa ggaggtgtgg ggagatgagc aggccgactt tgtctgcaac 360
accctgcagc caggctgcaa gaacgtgtgc tacgatcact acttccccat ctcccacatc 420
cggctatggg ccctgcagct gatcttcgtg tccagcccag cgctcctagt ggccatgcac 480
gtggcctacc ggagacatga gaagaagagg aagttcatca agggggagat aaagagtgaa 540
tttaaggaca tcgaggagat caaaacccag aaggtccgca tcgaaggctc cctgtggtgg 600
acctacacaa gcagcatctt cttccgggtc atcttcgaag ccgccttcat gtacgtcttc 660
tatgtcatgt acgacggctt ctccatgcag cggctggtga agtgcaacgc ctggccttgt 720
cccaacactg tggactgctt tgtgtcccgg cccacggaga agactgtctt cacagtgttc 780
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tcagtgaggg taagtatttt cctgttgtca agaatagcat tgtaaaagca ttttgtaata 2220
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<210> 442
<211> 226
<212> PRT
<213> Homo sapiens

<400> 442
Met Asp Trp Gly Thr Leu Gln Thr Ile Leu Gly Gly Val Asn Lys His
5 10 15

Ser Thr Ser Ile Gly Lys Ile Trp Leu Thr Val Leu Phe Ile Phe Arg
20 25 30

Ile Met Ile Leu Val Val Ala Ala Lys Glu Val Trp Gly Asp Glu Gln
35 40 45

Ala Asp Phe Val Cys Asn Thr Leu Gln Pro Gly Cys Lys Asn Val Cys
50 55 60

Tyr Asp His Tyr Phe Pro Ile Ser His Ile Arg Leu Trp Ala Leu Gln
65 70 75 80

Leu Ile Phe Val Ser Ser Pro Ala Leu Leu Val Ala Met His Val Ala
85 90 95

Tyr Arg Arg His Glu Lys Lys Arg Lys Phe Ile Lys Gly Glu Ile Lys
100 105 110

Ser Glu Phe Lys Asp Ile Glu Glu Ile Lys Thr Gln Lys Val Arg Ile
115 120 125

Glu Gly Ser Leu Trp Trp Thr Tyr Thr Ser Ser Ile Phe Phe Arg Val
130 135 140

Ile Phe Glu Ala Ala Phe Met Tyr Val Phe Tyr Val Met Tyr Asp Gly
145 150 155 160

Phe Ser Met Gln Arg Leu Val Lys Cys Asn Ala Trp Pro Cys Pro Asn

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                165                 170                 175

Thr Val Asp Cys Phe Val Ser Arg Pro Thr Glu Lys Thr Val Phe Thr
            180                 185                 190

Val Phe Met Ile Ala Val Ser Gly Ile Cys Ile Leu Leu Asn Val Thr
        195                 200                 205

Glu Leu Cys Tyr Leu Leu Ile Arg Tyr Cys Ser Gly Lys Ser Lys Lys
    210                 215                 220

Pro Val
225
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<210> 443
<211> 23
<212> PRT
<213> Homo sapiens

<400> 443
Val Lys Leu Cys Gly Ile Asp Pro Cys Pro Asn Leu Val Asp Cys Phe
                  5   10   15

Ile Ser Arg Pro Gly Cys Gly
             20

<210> 444
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 444
caatcaggca tgcacaacaa actgtatatc ggaaac 36

<210> 445
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 445
cgtcaagatc ttcattactt ccgtcttgac 30

<210> 446
<211> 579

<212> PRT
<213> Homo sapiens

<400> 446

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Met Asn Lys Leu Tyr Ile Gly Asn Leu Ser Glu Asn Ala Ala Pro Ser
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Asp Leu Glu Ser Ile Phe Lys Asp Ala Lys Ile Pro Val Ser Gly Pro
            20                  25                  30

Phe Leu Val Lys Thr Gly Tyr Ala Phe Val Asp Cys Pro Asp Glu Ser
        35                  40                  45

Trp Ala Leu Lys Ala Ile Glu Ala Leu Ser Gly Lys Ile Glu Leu His
    50                  55                  60

Gly Lys Pro Ile Glu Val Glu His Ser Val Pro Lys Arg Gln Arg Ile
65                  70                  75                  80

Arg Lys Leu Gln Ile Arg Asn Ile Pro Pro His Leu Gln Trp Glu Val
                85                  90                  95

Leu Asp Ser Leu Leu Val Gln Tyr Gly Val Val Glu Ser Cys Glu Gln
            100                 105                 110

Val Asn Thr Asp Ser Glu Thr Ala Val Val Asn Val Thr Tyr Ser Ser
        115                 120                 125

Lys Asp Gln Ala Arg Gln Ala Leu Asp Lys Leu Asn Gly Phe Gln Leu
    130                 135                 140

Glu Asn Phe Thr Leu Lys Val Ala Tyr Ile Pro Asp Glu Thr Ala Ala
145                 150                 155                 160

Gln Gln Asn Pro Leu Gln Gln Pro Arg Gly Arg Arg Gly Leu Gly Gln
                165                 170                 175

Arg Gly Ser Ser Arg Gln Gly Ser Pro Gly Ser Val Ser Lys Gln Lys
            180                 185                 190

Pro Cys Asp Leu Pro Leu Arg Leu Leu Val Pro Thr Gln Phe Val Gly
        195                 200                 205

Ala Ile Ile Gly Lys Glu Gly Ala Thr Ile Arg Asn Ile Thr Lys Gln
    210                 215                 220

Thr Gln Ser Lys Ile Asp Val His Arg Lys Glu Asn Ala Gly Ala Ala
225                 230                 235                 240
Glu Lys Ser Ile Thr Ile Leu Ser Thr Pro Glu Gly Thr Ser Ala Ala
                245                 250                 255

Cys Lys Ser Ile Leu Glu Ile Met His Lys Glu Ala Gln Asp Ile Lys
            260                 265                 270
```

```
Phe Thr Glu Glu Ile Pro Leu Lys Ile Leu Ala His Asn Asn Phe Val
        275                 280                 285

Gly Arg Leu Ile Gly Lys Glu Gly Arg Asn Leu Lys Lys Ile Glu Gln
    290                 295                 300

Asp Thr Asp Thr Lys Ile Thr Ile Ser Pro Leu Gln Glu Leu Thr Leu
305                 310                 315                 320

Tyr Asn Pro Glu Arg Thr Ile Thr Val Lys Gly Asn Val Glu Thr Cys
                325                 330                 335

Ala Lys Ala Glu Glu Glu Ile Met Lys Lys Ile Arg Glu Ser Tyr Glu
            340                 345                 350

Asn Asp Ile Ala Ser Met Asn Leu Gln Ala His Leu Ile Pro Gly Leu
        355                 360                 365

Asn Leu Asn Ala Leu Gly Leu Phe Pro Pro Thr Ser Gly Met Pro Pro
    370                 375                 380

Pro Thr Ser Gly Pro Pro Ser Ala Met Thr Pro Pro Tyr Pro Gln Phe
385                 390                 395                 400

Glu Gln Ser Glu Thr Glu Thr Val His Leu Phe Ile Pro Ala Leu Ser
                405                 410                 415

Val Gly Ala Ile Ile Gly Lys Gln Gly Gln His Ile Lys Gln Leu Ser
            420                 425                 430

Arg Phe Ala Gly Ala Ser Ile Lys Ile Ala Pro Ala Glu Ala Pro Asp
        435                 440                 445

Ala Lys Val Arg Met Val Ile Ile Thr Gly Pro Pro Glu Ala Gln Phe
    450                 455                 460

Lys Ala Gln Gly Arg Ile Tyr Gly Lys Ile Lys Glu Glu Asn Phe Val
465                 470                 475                 480

Ser Pro Lys Glu Glu Val Lys Leu Glu Ala His Ile Arg Val Pro Ser
                485                 490                 495

Phe Ala Ala Gly Arg Val Ile Gly Lys Gly Gly Lys Thr Val Asn Glu
            500                 505                 510

Leu Gln Asn Leu Ser Ser Ala Glu Val Val Val Pro Arg Asp Gln Thr
        515                 520                 525

Pro Asp Glu Asn Asp Gln Val Val Val Lys Ile Thr Gly His Phe Tyr
    530                 535                 540

Ala Cys Gln Val Ala Gln Arg Lys Ile Gln Glu Ile Leu Thr Gln Val
545                 550                 555                 560
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Lys Gln His Gln Gln Gln Lys Ala Leu Gln Ser Gly Pro Pro Gln Ser
565 570 575

Arg Arg Lys

<210> 447
<211> 1743
<212> DNA
<213> Homo sapiens

<400> 447
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ttcgtggact gcccggacga gagctgggcc ctcaaggcca tcgaggcgct ttcaggtaaa 180
atagaactgc acgggaaacc catagaagtt gagcactcgg tcccaaaaag gcaaaggatt 240
cggaaacttc agatacgaaa tatcccgcct catttacagt gggaggtgct ggatagttta 300
ctagtccagt atggagtggt ggagagctgt gagcaagtga acactgactc ggaaactgca 360
gttgtaaatg taacctattc cagtaaggac caagctagac aagcactaga caaactgaat 420
ggatttcagt tagagaattt caccttgaaa gtagcctata tccctgatga aacggccgcc 480
cagcaaaacc ccttgcagca gccccgaggt cgccgggggc ttgggcagag gggctcctca 540
aggcaggggt ctccaggatc cgtatccaag cagaaaccat gtgatttgcc tctgcgcctg 600
ctggttccca cccaatttgt tggagccatc ataggaaaag aaggtgccac cattcggaac 660
atcaccaaac agacccagtc taaaatcgat gtccaccgta aagaaaatgc gggggctgct 720
gagaagtcga ttactatcct ctctactcct gaaggcacct ctgcggcttg taagtctatt 780
ctggagatta tgcataagga agctcaagat ataaaattca cagaagagat ccccttgaag 840
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gaggctcagt tcaaggctca gggaagaatt tatggaaaaa ttaaagaaga aaactttgtt 1440
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ggtcacttct atgcttgcca ggttgcccag agaaaaattc aggaaattct gactcaggta 1680
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tga 1743

<210> 448
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 448

cgtactagca tatgaacaaa ctgtatatcg gaaac 35

<210> 449
<211> 579
<212> PRT
<213> Homo sapiens

<400> 449

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Met Asn Lys Leu Tyr Ile Gly Asn Leu Ser Glu Asn Ala Ala Pro Ser
                5                  10                  15

Asp Leu Glu Ser Ile Phe Lys Asp Ala Lys Ile Pro Val Ser Gly Pro
            20                  25                  30

Phe Leu Val Lys Thr Gly Tyr Ala Phe Val Asp Cys Pro Asp Glu Ser
        35                  40                  45

Trp Ala Leu Lys Ala Ile Glu Ala Leu Ser Gly Lys Ile Glu Leu His
    50                  55                  60

Gly Lys Pro Ile Glu Val Glu His Ser Val Pro Lys Arg Gln Arg Ile
65                  70                  75                  80

Arg Lys Leu Gln Ile Arg Asn Ile Pro Pro His Leu Gln Trp Glu Val
                85                  90                  95

Leu Asp Ser Leu Leu Val Gln Tyr Gly Val Val Glu Ser Cys Glu Gln
            100                 105                 110

Val Asn Thr Asp Ser Glu Thr Ala Val Val Asn Val Thr Tyr Ser Ser
        115                 120                 125

Lys Asp Gln Ala Arg Gln Ala Leu Asp Lys Leu Asn Gly Phe Gln Leu
    130                 135                 140

Glu Asn Phe Thr Leu Lys Val Ala Tyr Ile Pro Asp Glu Thr Ala Ala
145                 150                 155                 160

Gln Gln Asn Pro Leu Gln Gln Pro Arg Gly Arg Arg Gly Leu Gly Gln
                165                 170                 175

Arg Gly Ser Ser Arg Gln Gly Ser Pro Gly Ser Val Ser Lys Gln Lys
            180                 185                 190

Pro Cys Asp Leu Pro Leu Arg Leu Leu Val Pro Thr Gln Phe Val Gly
        195                 200                 205

Ala Ile Ile Gly Lys Glu Gly Ala Thr Ile Arg Asn Ile Thr Lys Gln
    210                 215                 220
Thr Gln Ser Lys Ile Asp Val His Arg Lys Glu Asn Ala Gly Ala Ala
225                 230                 235                 240

Glu Lys Ser Ile Thr Ile Leu Ser Thr Pro Glu Gly Thr Ser Ala Ala
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                245                 250                 255

Cys Lys Ser Ile Leu Glu Ile Met His Lys Glu Ala Gln Asp Ile Lys
            260                 265                 270

Phe Thr Glu Glu Ile Pro Leu Lys Ile Leu Ala His Asn Asn Phe Val
        275                 280                 285

Gly Arg Leu Ile Gly Lys Glu Gly Arg Asn Leu Lys Lys Ile Glu Gln
    290                 295                 300

Asp Thr Asp Thr Lys Ile Thr Ile Ser Pro Leu Gln Glu Leu Thr Leu
305                 310                 315                 320

Tyr Asn Pro Glu Arg Thr Ile Thr Val Lys Gly Asn Val Glu Thr Cys
                325                 330                 335

Ala Lys Ala Glu Glu Glu Ile Met Lys Lys Ile Arg Glu Ser Tyr Glu
            340                 345                 350

Asn Asp Ile Ala Ser Met Asn Leu Gln Ala His Leu Ile Pro Gly Leu
        355                 360                 365

Asn Leu Asn Ala Leu Gly Leu Phe Pro Pro Thr Ser Gly Met Pro Pro
    370                 375                 380

Pro Thr Ser Gly Pro Pro Ser Ala Met Thr Pro Pro Tyr Pro Gln Phe
385                 390                 395                 400

Glu Gln Ser Glu Thr Glu Thr Val His Leu Phe Ile Pro Ala Leu Ser
                405                 410                 415

Val Gly Ala Ile Ile Gly Lys Gln Gly Gln His Ile Lys Gln Leu Ser
            420                 425                 430

Arg Phe Ala Gly Ala Ser Ile Lys Ile Ala Pro Ala Glu Ala Pro Asp
        435                 440                 445

Ala Lys Val Arg Met Val Ile Ile Thr Gly Pro Pro Glu Ala Gln Phe
    450                 455                 460
Lys Ala Gln Gly Arg Ile Tyr Gly Lys Ile Lys Glu Glu Asn Phe Val
465                 470                 475                 480

Ser Pro Lys Glu Glu Val Lys Leu Glu Ala His Ile Arg Val Pro Ser
                485                 490                 495

Phe Ala Ala Gly Arg Val Ile Gly Lys Gly Gly Lys Thr Val Asn Glu
            500                 505                 510

Leu Gln Asn Leu Ser Ser Ala Glu Val Val Val Pro Arg Asp Gln Thr
        515                 520                 525

Pro Asp Glu Asn Asp Gln Val Val Val Lys Ile Thr Gly His Phe Tyr
    530                 535                 540
```

```
Ala Cys Gln Val Ala Gln Arg Lys Ile Gln Glu Ile Leu Thr Gln Val
545                 550                 555                 560

Lys Gln His Gln Gln Gln Lys Ala Leu Gln Ser Gly Pro Pro Gln Ser
                565                 570                 575

Arg Arg Lys
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<210> 450
<211> 1743
<212> DNA
<213> Homo sapiens

<400> 450
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ttcgtggact gcccggacga gagctgggcc ctcaaggcca tcgaggcgct ttcaggtaaa 180
atagaactgc acgggaaacc catagaagtt gagcactcgg tcccaaaaag gcaaaggatt 240
cggaaacttc agatacgaaa tatcccgcct catttacagt gggaggtgct ggatagttta 300
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gttgtaaatg taacctattc cagtaaggac caagctagac aagcactaga caaactgaat 420
ggatttcagt tagagaattt caccttgaaa gtagcctata tccctgatga aacggccgcc 480
cagcaaaacc ccttgcagca gccccgaggt cgccgggggc ttgggcagag gggctcctca 540
aggcaggggt ctccaggatc cgtatccaag cagaaaccat gtgatttgcc tctgcgcctg 600
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gttgttgtcc ctcgtgacca gacacctgat gagaatgacc aagtggttgt caaaataact 1620
ggtcacttct atgcttgcca ggttgcccag agaaaaattc aggaaattct gactcaggta 1680
aagcagcacc aacaacagaa ggctctgcaa agtggaccac ctcagtcaag acggaagtaa 1740
tga 1743

<210> 451
<211> 25
<212> PRT
<213> Homo sapiens

<400> 451
Leu Gly Lys Glu Val Arg Asp Ala Lys Ile Thr Pro Glu Ala Phe Glu
5 10 15

Lys Leu Gly Phe Pro Ala Ala Lys Glu
20 25

<210> 452
<211> 25
<212> PRT
<213> Homo sapiens

<400> 452
Lys Ala Ser Asp Gly Asp Tyr Tyr Thr Leu Ala Val Pro Met Gly Asp
5 10 15

Val Pro Met Asp Gly Ile Ser Val Ala
20 25

<210> 453
<211> 16
<212> PRT
<213> Homo sapiens

<400> 453
Pro Asp Arg Asp Val Asn Leu Thr His Gln Leu Asn Pro Lys Val Lys
5 10 15

<210> 454
<211> 20
<212> PRT
<213> Homo sapiens

<400> 454
Lys Ile Ala Pro Ala Glu Ala Pro Asp Ala Lys Val Arg Met Val Ile
5 10 15

Ile Thr Gly Pro
20

<210> 455
<211> 20
<212> PRT
<213> Homo sapiens

<400> 455
Pro Asp Glu Thr Ala Ala Gln Gln Asn Pro Leu Gln Gln Pro Arg Gly
5 10 15

Arg Arg Gly Leu

20

<210> 456
<211> 20
<212> PRT
<213> Homo sapiens

<400> 456
Arg Thr Ile Thr Val Lys Gly Asn Val Glu Thr Cys Ala Lys Ala Glu
5 10 15

Glu Glu Ile Met
20

<210> 457
<211> 20
<212> PRT
<213> Homo sapiens

<400> 457
Ala Phe Val Asp Cys Pro Asp Glu Ser Trp Ala Leu Lys Ala Ile Glu
5 10 15

Ala Leu Ser Gly
20

<210> 458
<211> 20
<212> PRT
<213> Homo sapiens

<400> 458
Ile Arg Lys Leu Gln Ile Arg Asn Ile Pro Pro His Leu Gln Trp Glu
5 10 15

Val Leu Asp Ser
20

<210> 459
<211> 20
<212> PRT
<213> Homo sapiens

<400> 459
Ala Gln Gln Asn Pro Leu Gln Gln Pro Arg Gly Arg Arg Gly Leu Gly
5 10 15

Gln Arg Gly Ser
20

<210> 460
<211> 20
<212> PRT
<213> Homo sapiens

<400> 460
Asp Val His Arg Lys Glu Asn Ala Gly Ala Ala Glu Lys Ser Ile Thr
5 10 15

Ile Leu Ser Thr
20

<210> 461
<211> 20
<212> PRT
<213> Homo sapiens

<400> 461
Leu Tyr Asn Pro Glu Arg Thr Ile Thr Val Lys Gly Asn Val Glu Thr
5 10 15

Cys Ala Lys Ala
20

<210> 462
<211> 20
<212> PRT
<213> Homo sapiens

<400> 462
Glu Glu Glu Ile Met Lys Lys Ile Arg Glu Ser Tyr Glu Asn Asp Ile
5 10 15

Ala Ser Met Asn
20

<210> 463
<211> 20
<212> PRT
<213> Homo sapiens

<400> 463
Leu Asn Ala Leu Gly Leu Phe Pro Pro Thr Ser Gly Met Pro Pro Pro
5 10 15

Thr Ser Gly Pro
20

<210> 464
<211> 20

<212> PRT
<213> Homo sapiens

<400> 464
Lys Ile Ala Pro Ala Glu Ala Pro Asp Ala Lys Val Arg Met Val Ile
5 10 15

Ile Thr Gly Pro
20

<210> 465
<211> 18
<212> PRT
<213> Homo sapiens

<400> 465
Thr Gly Tyr Ala Phe Val Asp Cys Pro Asp Glu Ser Trp Ala Leu Lys Ile
5 10 15
Glu

<210> 466
<211> 11
<212> PRT
<213> Homo sapiens

<400> 466
Phe Val Asp Cys Pro Asp Glu Ser Trp Ala Leu
5 10

<210> 467
<211> 33
<212> DNA
<213> Homo sapiens

<400> 467
ttcgtggact gcccggacga gagctgggcc ctc 33

<210> 468
<211> 24
<212> PRT
<213> Homo sapiens

<400> 468
Ile Pro Asp Glu Met Ala Ala Gln Gln Asn Pro Leu Gln Gln Pro Arg
5 10 15

Gly Arg Arg Gly Leu Gly Gln Arg
20

<210> 469
<211> 24

<212> PRT
<213> Homo sapiens

<400> 469
Ile Pro Asp Glu Thr Ala Ala Gln Gln Asn Pro Ser Pro Gln Leu Arg
1 5 10 15

Gly Arg Arg Gly Pro Gly Gln Arg
20

<210> 470
<211> 20
<212> PRT
<213> Homo sapiens

<400> 470
Ser Gly Pro Phe Leu Val Lys Thr Gly Tyr Ala Phe Val Asp Cys Pro
1 5 10 15

Asp Glu Ser Trp
20

<210> 471
<211> 70
<212> PRT
<213> Homo sapiens

<400> 471
Asp Gln Ala Arg Gln Ala Leu Asp Lys Leu Asn Gly Phe Gln Leu Glu
1 5 10 15

Asn Phe Thr Leu Lys Val Ala Tyr Ile Pro Asp Glu Thr Ala Ala Gln
20 25 30

Gln Asn Pro Leu Gln Gln Pro Arg Gly Arg Arg Gly Leu Gly Gln Arg
35 40 45

Gly Ser Ser Arg Gln Gly Ser Pro Gly Ser Val Ser Lys Gln Lys Pro
50 55 60

Cys Asp Leu Pro Leu Arg
65 70

<210> 472
<211> 70
<212> PRT
<213> Homo sapiens

<400> 472
Lys Gln Lys Pro Cys Asp Leu Pro Leu Arg Leu Leu Val Pro Thr Gln
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Thr Lys Gln Thr Gln Ser Lys Ile Asp Val His Arg Lys Glu Asn Ala
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Gly Ala Ala Glu Lys Ser Ile Thr Ile Leu Ser Thr Pro Glu Gly Thr
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Ser Ala Ala Cys Lys Ser
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<211> 70
<212> PRT
<213> Homo sapiens

<400> 473

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Leu Ala His Asn Asn Phe Val Gly Arg Leu Ile Gly Lys Glu Gly Arg
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Asn Leu Lys Lys Ile Glu Gln Asp Thr Asp Thr Lys Ile Thr Ile Ser
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Pro Leu Gln Glu Leu Thr
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<211> 70
<212> PRT
<213> Homo sapiens

<400> 474

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Glu Ile Met Lys Lys Ile Arg Glu Ser Tyr Glu Asn Asp Ile Ala Ser
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Gly Ala Ile Ile Gly Lys Gln Gly Gln His Ile Lys Gln Leu Ser Arg
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Phe Ala Gly Ala Ser Ile
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Glu Ala Gln Phe Lys Ala Gln Gly Arg Ile Tyr Gly Lys Ile Lys Glu
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Glu Asn Phe Val Ser Pro Lys Glu Glu Val Lys Leu Glu Ala His Ile
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Arg Val Pro Ser Phe Ala Ala Gly Arg Val Ile Gly Lys Gly Gly Lys
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Thr

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<213> Homo sapiens

<400> 477

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Asn Asp Gln Val Val Val Lys Ile Thr Gly His Phe Tyr Ala Cys Gln
         35                  40                  45

Val Ala Gln Arg Lys Ile Gln Glu Ile Leu Thr Gln Val Lys Gln His
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Gln Gln Gln Lys Ala Leu Gln Ser Gly Pro Pro Gln Ser Arg Arg Lys
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<212> DNA
<213> Homo sapiens

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Arg Lys Leu Gln Ile Arg Asn Ile Pro Pro His Leu Gln Trp Glu Val
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Leu Asp Ser Leu Leu Val Gln Tyr Gly Val Val Glu Ser Cys Glu Gln
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Val Asn Thr Asp Ser Glu Thr Ala Val Val Asn Val Thr Tyr Ser Ser
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Lys Asp Gln Ala Arg Gln Ala Leu Asp Lys Leu Asn Gly Phe Gln Leu
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Glu Asn Phe Thr Leu Lys Val Ala Tyr Ile Pro Asp Glu Thr Ala Ala
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Gln Gln Asn Pro Leu Gln Gln Pro Arg Gly Arg Arg Gly Leu Gly Gln
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Arg Gly Ser Ser Arg Gln Gly Ser Pro Gly Ser Val Ser Lys Gln Lys
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ttcgtggact gcccggacga gagctgggcc ctcaaggcca tcgaggcgct ttcaggtaaa 180
atagaactgc acgggaaacc catagaagtt gagcactcgg tcccaaaaag gcaaaggatt 240
cggaaacttc agatacgaaa tatcccgcct cacttacagt gggaggtgct ggatagttta 300
ctagtccagt atggagtggt ggagagctgt gagcaagtga acactgactc ggaaactgca 360
gttgtaaatg taacctattc cagtaaggac caagctagac aagcactaga caaactgaat 420
ggatttcagt tagagaattt caccttgaaa gtagcctata tccctgatga aatggccgcc 480
cagcaaaacc ccttgcagca gccccgaggt cgccgggggc ttgggcagag gggctcctca 540
aggcaggggt ctccaggatc tgtgtccaag cagaaaccat gtgatttgcc tctgcgcctg 600
ctggttccca cccaatttgt tggagccatc ataggaaaag aaggtgccac cattcggaac 660
atcaccaaac agacccagtc taaaatcgat gtccaccgta aagaaaatgc aggggctgct 720
gagaagtcaa ttactatcct ctctacacct gaaggcacct ctgcggcttg taagtctatt 780
ctggagatca tgcataagga agctcaagat ataaaattca cagaagagat ccccttgaag 840
attttagctc ataataactt tgttggccgt cttattggta aagaaggaag aaatcttaaa 900
aaaattgagc aggacacaga cactaaaatc acgatatctc cattgcagga attgacgctg 960

tataatccag aacgcaccat tacagttaaa ggcaatgttg agacgtgtgc caaagctgag 1020
gaagagatca tgaagaaaat tagggagtct tatgaaaatg atattgcttc tatgaatctt 1080
caagcacatt taattcctgg attaaatctg aacgccttgg gtctgttccc acccacttca 1140
gggatgccac ctcccacctc agggcccccc tcagccatga ctcctcccta cccgcagttt 1200
gagcaatcag aaacggagac tgttcatctc tttatcccgg ctctatcagt cggtgccatc 1260
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attgctccag cagaagcacc agatgctaaa gtgaggatgg tgattatcac tggaccacca 1380
gaggctcagt tcaaggctca gggaagaatt tatggaaaaa ttaaagaaga aaactttgtt 1440
agtcctaaag aagaggtgaa acttgaagct catatcagag tgccatgctt tgctggtggc 1500
agagttattg gaaaaggagg caaaacggtg aatgaacttc agaatttgtc aagtgcagaa 1560
gttgttgtcc ctcgtgacca gacacctgat gagaatgacc aagtggttgt caaaataact 1620
ggtcacttct atgcttgcca ggttgcccag agaaaaattc aggaaattct gactcaggta 1680
aagcagcacc aacaacagaa ggctctgcaa agtggaccac ctcagtcaag acggaagtaa 1740

<210> 484
<211> 579
<212> PRT
<213> primate

<400> 484
Met Asn Lys Leu Tyr Ile Gly Asn Leu Ser Asp Asn Ala Ala Pro Ser
1 5 10 15

Asp Leu Glu Ser Ile Phe Lys Asp Ala Lys Ile Pro Val Ser Gly Pro
20 25 30

Phe Leu Val Lys Thr Gly Tyr Ala Phe Val Asp Cys Pro Asp Glu Ser
35 40 45

Trp Ala Leu Lys Ala Ile Glu Ala Leu Ser Gly Lys Ile Glu Leu His
50 55 60

Gly Lys Pro Ile Glu Val Glu His Ser Val Pro Lys Arg Gln Arg Ile
65 70 75 80

Arg Lys Leu Gln Ile Arg Asn Ile Pro Pro His Leu Gln Trp Glu Val
85 90 95

Leu Asp Ser Leu Leu Val Gln Tyr Gly Val Val Glu Ser Cys Glu Gln
100 105 110

Val Asn Thr Asp Ser Glu Thr Ala Val Val Asn Val Thr Tyr Ser Ser
115 120 125

Lys Asp Gln Ala Arg Gln Ala Leu Asp Lys Leu Asn Gly Phe Gln Leu
130 135 140

Glu Asn Phe Thr Leu Lys Val Ala Tyr Ile Pro Asp Glu Met Ala Ala
145 150 155 160

Gln Gln Asn Pro Leu Gln Gln Pro Arg Gly Arg Arg Gly Leu Gly Gln
165 170 175

Arg Gly Ser Ser Arg Gln Gly Ser Pro Gly Ser Val Ser Lys Gln Lys

```
            180                 185                 190

Pro Cys Asp Leu Pro Leu Arg Leu Leu Val Pro Thr Gln Phe Val Gly
        195                 200                 205

Ala Ile Ile Gly Lys Glu Gly Ala Thr Ile Arg Asn Ile Thr Lys Gln
    210                 215                 220

Thr Gln Ser Lys Ile Asp Val His Arg Lys Glu Asn Ala Gly Ala Ala
225                 230                 235                 240

Glu Lys Ser Ile Thr Ile Leu Ser Thr Pro Glu Gly Thr Ser Ala Ala
                245                 250                 255

Cys Lys Ser Ile Leu Glu Ile Met His Lys Glu Ala Gln Asp Ile Lys
            260                 265                 270

Phe Thr Glu Glu Ile Pro Leu Lys Ile Leu Ala His Asn Asn Phe Val
        275                 280                 285

Gly Arg Leu Ile Gly Lys Glu Gly Arg Asn Leu Lys Lys Ile Glu Gln
    290                 295                 300

Asp Thr Asp Thr Lys Ile Thr Ile Ser Pro Leu Gln Glu Leu Thr Leu
305                 310                 315                 320

Tyr Asn Pro Glu Arg Thr Ile Thr Val Lys Gly Asn Val Glu Thr Cys
                325                 330                 335

Ala Lys Ala Glu Glu Glu Ile Met Lys Lys Ile Arg Glu Ser Tyr Glu
            340                 345                 350

Asn Asp Ile Ala Ser Met Asn Leu Gln Ala His Leu Ile Pro Gly Leu
        355                 360                 365

Asn Leu Asn Ala Leu Gly Leu Phe Pro Pro Thr Ser Gly Met Pro Pro
    370                 375                 380

Pro Thr Ser Gly Pro Pro Ser Ala Met Thr Pro Pro Tyr Pro Gln Phe
385                 390                 395                 400

Glu Gln Ser Glu Thr Glu Thr Val His Leu Phe Ile Pro Ala Leu Ser
                405                 410                 415

Val Gly Ala Ile Ile Gly Lys Gln Gly Gln His Ile Lys Gln Leu Ser
            420                 425                 430

Arg Phe Ala Gly Ala Ser Ile Lys Ile Ala Pro Ala Glu Ala Pro Asp
        435                 440                 445

Ala Lys Val Arg Met Val Ile Ile Thr Gly Pro Pro Glu Ala Gln Phe
    450                 455                 460

Lys Ala Gln Gly Arg Ile Tyr Gly Lys Ile Lys Glu Glu Asn Phe Val
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465                 470                 475                 480

Ser Pro Lys Glu Glu Val Lys Leu Glu Ala His Ile Arg Val Pro Cys
                485                 490                 495

Phe Ala Gly Gly Arg Val Ile Gly Lys Gly Gly Lys Thr Val Asn Glu
            500                 505                 510

Leu Gln Asn Leu Ser Ser Ala Glu Val Val Val Pro Arg Asp Gln Thr
        515                 520                 525

Pro Asp Glu Asn Asp Gln Val Val Val Lys Ile Thr Gly His Phe Tyr
    530                 535                 540

Ala Cys Gln Val Ala Gln Arg Lys Ile Gln Glu Ile Leu Thr Gln Val
545                 550                 555                 560

Lys Gln His Gln Gln Gln Lys Ala Leu Gln Ser Gly Pro Pro Gln Ser
                565                 570                 575

Arg Arg Lys
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<210> 485
<211> 1799
<212> DNA
<213> Homo sapiens

<400> 485

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ggtgaagact ggctacgcgt tcgtggactg cccggacgag agctgggccc tcaaggccat 180
cgaggcgctt tcaggtaaaa tagaactgca cgggaaaccc atagaagttg agcactcggt 240
cccaaaaagg caaaggattc ggaaacttca gatacgaaat atcccgcctc atttacagtg 300
ggaggtgctg gatagtttac tagtccagta tggagtggtg gagagctgtg agcaagtgaa 360
cactgactcg gaaactgcag ttgtaaatgt aacctattcc agtaaggacc aagctagaca 420
agcactagac aaactgaatg gatttcagtt agagaatttc accttgaaag tagcctatat 480
ccctgatgaa acggccgccc agcaaaaccc cttgcagcag ccccgaggtc gccgggggct 540
tgggcagagg ggctcctcaa ggcaggggtc tccaggatcc gtatccaagc agaaaccatg 600
tgatttgcct ctgcgcctgc tggttcccac ccaatttgtt ggagccatca taggaaaaga 660
aggtgccacc attcggaaca tcaccaaaca gacccagtct aaaatcgatg tccaccgtaa 720
agaaaatgcg ggggctgctg agaagtcgat tactatcctc tctactcctg aaggcacctc 780
tgcggcttgt aagtctattc tggagattat gcataaggaa gctcaagata taaaattcac 840
agaagagatc cccttgaaga ttttagctca taataacttt gttggacgtc ttattggtaa 900
agaaggaaga aatcttaaaa aaattgagca agacacagac actaaaatca cgatatctcc 960
attgcaggaa ttgacgctgt ataatccaga acgcactatt acagttaaag gcaatgttga 1020
gacatgtgcc aaagctgagg aggagatcat gaagaaaatc agggagtctt atgaaaatga 1080
tattgcttct atgaatcttc aagcacattt aattcctgga ttaaatctga acgccttggg 1140
tctgttccca cccacttcag ggatgccacc tcccacctca gggccccctt cagccatgac 1200
tcctccctac ccgcagtttg agcaatcaga aacggagact gttcatctgt ttatcccagc 1260
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tgctggagct tcaattaaga ttgctccagc ggaagcacca gatgctaaag tgaggatggt 1380
gattatcact ggaccaccag aggctcagtt caaggctcag ggaagaattt atggaaaaat 1440
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taaagaagaa aactttgtta gtcctaaaga agaggtgaaa cttgaagctc atatcagagt 1500
gccatccttt gctgctggca gagttattgg aaaaggaggc aaaacggtga atgaacttca 1560
gaatttgtca agtgcagaag ttgttgtccc tcgtgaccag acacctgatg agaatgacca 1620
agtggttgtc aaaataactg gtcacttcta tgcttgccag gttgcccaga gaaaaattca 1680
ggaaattctg actcaggtaa agcagcacca acaacagaag gctctgcaaa gtggaccacc 1740
tcagtcaaga cggaagcatc atcaccatca tcatcaccat caccattaag aattccccc 1799

<210> 486
<211> 589
<212> PRT
<213> Homo sapiens

<400> 486
Met Asn Lys Leu Tyr Ile Gly Asn Leu Ser Glu Asn Ala Ala Pro Ser
1 5 10 15

Asp Leu Glu Ser Ile Phe Lys Asp Ala Lys Ile Pro Val Ser Gly Pro
20 25 30

Phe Leu Val Lys Thr Gly Tyr Ala Phe Val Asp Cys Pro Asp Glu Ser
35 40 45

Trp Ala Leu Lys Ala Ile Glu Ala Leu Ser Gly Lys Ile Glu Leu His
50 55 60

Gly Lys Pro Ile Glu Val Glu His Ser Val Pro Lys Arg Gln Arg Ile
65 70 75 80

Arg Lys Leu Gln Ile Arg Asn Ile Pro Pro His Leu Gln Trp Glu Val
85 90 95

Leu Asp Ser Leu Leu Val Gln Tyr Gly Val Val Glu Ser Cys Glu Gln
100 105 110

Val Asn Thr Asp Ser Glu Thr Ala Val Val Asn Val Thr Tyr Ser Ser
115 120 125

Lys Asp Gln Ala Arg Gln Ala Leu Asp Lys Leu Asn Gly Phe Gln Leu
130 135 140

Glu Asn Phe Thr Leu Lys Val Ala Tyr Ile Pro Asp Glu Thr Ala Ala
145 150 155 160

Gln Gln Asn Pro Leu Gln Gln Pro Arg Gly Arg Arg Gly Leu Gly Gln
165 170 175

Arg Gly Ser Ser Arg Gln Gly Ser Pro Gly Ser Val Ser Lys Gln Lys
180 185 190

Pro Cys Asp Leu Pro Leu Arg Leu Leu Val Pro Thr Gln Phe Val Gly
195 200 205

Ala Ile Ile Gly Lys Glu Gly Ala Thr Ile Arg Asn Ile Thr Lys Gln
210 215 220

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Thr Gln Ser Lys Ile Asp Val His Arg Lys Glu Asn Ala Gly Ala Ala
225                 230                 235                 240

Glu Lys Ser Ile Thr Ile Leu Ser Thr Pro Glu Gly Thr Ser Ala Ala
                245                 250                 255

Cys Lys Ser Ile Leu Glu Ile Met His Lys Glu Ala Gln Asp Ile Lys
            260                 265                 270

Phe Thr Glu Glu Ile Pro Leu Lys Ile Leu Ala His Asn Asn Phe Val
        275                 280                 285

Gly Arg Leu Ile Gly Lys Glu Gly Arg Asn Leu Lys Lys Ile Glu Gln
    290                 295                 300

Asp Thr Asp Thr Lys Ile Thr Ile Ser Pro Leu Gln Glu Leu Thr Leu
305                 310                 315                 320

Tyr Asn Pro Glu Arg Thr Ile Thr Val Lys Gly Asn Val Glu Thr Cys
                325                 330                 335

Ala Lys Ala Glu Glu Glu Ile Met Lys Lys Ile Arg Glu Ser Tyr Glu
            340                 345                 350

Asn Asp Ile Ala Ser Met Asn Leu Gln Ala His Leu Ile Pro Gly Leu
        355                 360                 365

Asn Leu Asn Ala Leu Gly Leu Phe Pro Pro Thr Ser Gly Met Pro Pro
    370                 375                 380

Pro Thr Ser Gly Pro Pro Ser Ala Met Thr Pro Pro Tyr Pro Gln Phe
385                 390                 395                 400

Glu Gln Ser Glu Thr Glu Thr Val His Leu Phe Ile Pro Ala Leu Ser
                405                 410                 415

Val Gly Ala Ile Ile Gly Lys Gln Gly Gln His Ile Lys Gln Leu Ser
            420                 425                 430

Arg Phe Ala Gly Ala Ser Ile Lys Ile Ala Pro Ala Glu Ala Pro Asp
        435                 440                 445

Ala Lys Val Arg Met Val Ile Ile Thr Gly Pro Pro Glu Ala Gln Phe
    450                 455                 460

Lys Ala Gln Gly Arg Ile Tyr Gly Lys Ile Lys Glu Glu Asn Phe Val
465                 470                 475                 480

Ser Pro Lys Glu Glu Val Lys Leu Glu Ala His Ile Arg Val Pro Ser
                485                 490                 495

Phe Ala Ala Gly Arg Val Ile Gly Lys Gly Gly Lys Thr Val Asn Glu
            500                 505                 510
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Leu Gln Asn Leu Ser Ser Ala Glu Val Val Val Pro Arg Asp Gln Thr
515 520 525

Pro Asp Glu Asn Asp Gln Val Val Val Lys Ile Thr Gly His Phe Tyr
530 535 540

Ala Cys Gln Val Ala Gln Arg Lys Ile Gln Glu Ile Leu Thr Gln Val
545 550 555 560

Lys Gln His Gln Gln Gln Lys Ala Leu Gln Ser Gly Pro Pro Gln Ser
565 570 575

Arg Arg Lys His His His His His His His His His His
580 585

<210> 487
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 487
gggggaattc gccgccacca tgaacaaact gtatatcgga aacctcagc 49

<210> 488
<211> 67
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 488
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gtggtcc 67

<210> 489
<211> 30
<212> DNA
<213> Homo sapiens

<400> 489
tcagagaacc agggagcctt caagggcatg 30

<210> 490
<211> 10
<212> PRT
<213> Homo sapiens

<400> 490
Ser Glu Asn Gln Gly Ala Phe Lys Gly Met
5 10

<210> 491
<211> 9
<212> PRT
<213> Homo sapiens

<400> 491
Ala Ala Pro Ser Asp Leu Glu Ser Ile

<210> 492
<211> 20
<212> PRT
<213> Homo sapiens

<400> 492
Ser Thr Gly Asp Ala Asp Gly Pro Gly Gly Pro Gly Ile Pro Asp Gly
5 10 15

Pro Gly Gly Asn
20

<210> 493
<211> 20
<212> PRT
<213> Homo sapiens

<400> 493
Pro Gly Ile Pro Asp Gly Pro Gly Gly Asn Ala Gly Gly Pro Gly Glu
5 10 15

Ala Gly Ala Thr
20

<210> 494
<211> 20
<212> PRT
<213> Homo sapiens

<400> 494
Tyr Leu Ala Met Pro Phe Ala Thr Pro Met Glu Ala Glu Leu Ala Arg
5 10 15

Arg Ser Leu Ala
20

<210> 495
<211> 20
<212> PRT

<213> Homo sapiens

<400> 495
Trp Ile Thr Gln Cys Phe Leu Pro Val Phe Leu Ala Gln Pro Pro Ser
5 10 15

Gly Gln Arg Arg
20

<210> 496
<211> 20
<212> PRT
<213> Homo sapiens

<400> 496
Gly Gly Arg Gly Pro Arg Gly Ala Gly Ala Ala Arg Ala Ser Gly Pro
1 5 10 15
Gly Gly Gly Ala
20

<210> 497
<211> 20
<212> PRT
<213> Homo sapiens

<400> 497
Lys Ile Ala Pro Ala Glu Ala Pro Asp Ala Lys Val Arg Met Val Ile
5 10 15

Ile Thr Gly Pro
20

<210> 498
<211> 20
<212> PRT
<213> Homo sapiens

<400> 498
Lys Ile Ala Pro Pro Glu Thr Pro Asp Ser Lys Val Arg Met Val Ile
5 10 15

Ile Thr Gly Pro
20

<210> 499
<211> 20
<212> PRT
<213> Homo sapiens

<400> 499

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Lys Ile Ala Pro Ala Glu Gly Pro Asp Val Ser Glu Arg Met Val Ile
                  5                  10                  15

Ile Thr Gly Pro
             20


<210> 500
<211> 577
<212> PRT
<213> Homo sapiens

<400> 500
Met Asn Lys Leu Tyr Ile Gly Asn Leu Asn Glu Ser Val Thr Pro Ala
                  5                  10                  15

Asp Leu Glu Lys Val Phe Ala Glu His Lys Ile Ser Tyr Ser Gly Gln
             20                  25                  30

Phe Leu Val Lys Ser Gly Tyr Ala Phe Val Asp Cys Pro Asp Glu His
         35                  40                  45

Trp Ala Met Lys Ala Ile Glu Thr Phe Ser Gly Lys Val Glu Leu Gln
     50                  55                  60

Gly Lys Arg Leu Glu Ile Glu His Ser Val Pro Lys Lys Gln Arg Ser
 65                  70                  75                  80

Arg Lys Ile Gln Ile Arg Asn Ile Pro Pro Gln Leu Arg Trp Glu Val
                 85                  90                  95

Leu Asp Ser Leu Leu Ala Gln Tyr Gly Thr Val Glu Asn Cys Glu Gln
            100                 105                 110

Val Asn Thr Glu Ser Glu Thr Ala Val Val Asn Val Thr Tyr Ser Asn
        115                 120                 125

Arg Glu Gln Thr Arg Gln Ala Ile Met Lys Leu Asn Gly His Gln Leu
    130                 135                 140

Glu Asn His Ala Leu Lys Val Ser Tyr Ile Pro Asp Glu Gln Ile Ala
145                 150                 155                 160

Gln Gly Pro Glu Asn Gly Arg Arg Gly Gly Phe Gly Ser Arg Gly Gln
                165                 170                 175

Pro Arg Gln Gly Ser Pro Val Ala Ala Gly Ala Pro Ala Lys Gln Gln
            180                 185                 190

Gln Val Asp Ile Pro Leu Arg Leu Leu Val Pro Thr Gln Tyr Val Gly
        195                 200                 205

Ala Ile Ile Gly Lys Glu Gly Ala Thr Ile Arg Asn Ile Thr Lys Gln
    210                 215                 220
```

```
Thr Gln Ser Lys Ile Asp Val His Arg Lys Glu Asn Ala Gly Ala Ala
225                 230                 235                 240

Glu Lys Ala Ile Ser Val His Ser Thr Pro Glu Gly Cys Ser Ser Ala
                245                 250                 255

Cys Lys Met Ile Leu Glu Ile Met His Lys Glu Ala Lys Asp Thr Lys
            260                 265                 270

Thr Ala Asp Glu Val Pro Leu Lys Ile Leu Ala His Asn Asn Phe Val
        275                 280                 285

Gly Arg Leu Ile Gly Lys Glu Gly Arg Asn Leu Lys Lys Val Glu Gln
    290                 295                 300

Asp Thr Glu Thr Lys Ile Thr Ile Ser Ser Leu Gln Asp Leu Thr Leu
305                 310                 315                 320

Tyr Asn Pro Glu Arg Thr Ile Thr Val Lys Gly Ala Ile Glu Asn Cys
                325                 330                 335

Cys Arg Ala Glu Gln Glu Ile Met Lys Lys Val Arg Glu Ala Tyr Glu
            340                 345                 350

Asn Asp Val Ala Ala Met Ser Leu Gln Ser His Leu Ile Pro Gly Leu
        355                 360                 365

Asn Leu Ala Ala Val Gly Leu Phe Pro Ala Ser Ser Ser Ala Val Pro
    370                 375                 380

Pro Pro Pro Ser Ser Val Thr Gly Ala Ala Pro Tyr Ser Ser Phe Met
385                 390                 395                 400

Gln Ala Pro Glu Gln Glu Met Val Gln Val Phe Ile Pro Ala Gln Ala
                405                 410                 415

Val Gly Ala Ile Ile Gly Lys Lys Gly Gln His Ile Lys Gln Leu Ser
            420                 425                 430

Arg Phe Ala Ser Ala Ser Ile Lys Ile Ala Pro Pro Glu Thr Pro Asp
        435                 440                 445

Ser Lys Val Arg Met Val Ile Ile Thr Gly Pro Pro Glu Ala Gln Phe
    450                 455                 460

Lys Ala Gln Gly Arg Ile Tyr Gly Lys Leu Lys Glu Glu Asn Phe Phe
465                 470                 475                 480

Gly Pro Lys Glu Glu Val Lys Leu Glu Thr His Ile Arg Val Pro Ala
                485                 490                 495

Ser Ala Ala Gly Arg Val Ile Gly Lys Gly Gly Lys Thr Val Asn Glu
            500                 505                 510
```

```
Leu Gln Asn Leu Thr Ala Ala Glu Val Val Val Pro Arg Asp Gln Thr
        515                 520                 525

Pro Asp Glu Asn Asp Gln Val Ile Val Lys Ile Ile Gly His Phe Tyr
    530                 535                 540

Ala Ser Gln Met Ala Gln Arg Lys Ile Arg Asp Ile Leu Ala Gln Val
545                 550                 555                 560

Lys Gln Gln His Gln Lys Gly Gln Ser Asn Gln Ala Gln Ala Arg Arg
                565                 570                 575

Lys
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<210> 501
<211> 587
<212> PRT
<213> Homo sapiens

<400> 501

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Met Asn Lys Leu Tyr Ile Gly Asn Leu Ser Pro Ala Val Thr Ala Asp
                  5                  10                  15

Asp Leu Arg Gln Leu Phe Gly Asp Arg Lys Leu Pro Leu Ala Gly Gln
             20                  25                  30

Val Leu Leu Lys Ser Gly Tyr Ala Phe Val Asp Tyr Pro Asp Gln Asn
         35                  40                  45

Trp Ala Ile Arg Ala Ile Glu Thr Leu Ser Gly Lys Val Glu Leu His
     50                  55                  60

Gly Lys Ile Met Glu Val Asp Tyr Ser Val Ser Lys Lys Leu Arg Ser
 65                  70                  75                  80

Arg Lys Ile Gln Ile Arg Asn Ile Pro Pro His Leu Gln Trp Glu Val
                 85                  90                  95

Leu Asp Gly Leu Leu Ala Gln Tyr Gly Thr Val Glu Asn Val Glu Gln
            100                 105                 110

Val Asn Thr Asp Thr Glu Thr Ala Val Val Asn Val Thr Tyr Ala Thr
        115                 120                 125

Arg Glu Glu Ala Lys Ile Ala Met Glu Lys Leu Ser Gly His Gln Phe
    130                 135                 140

Glu Asn Tyr Ser Phe Lys Ile Ser Tyr Ile Pro Asp Glu Glu Val Ser
145                 150                 155                 160

Ser Pro Ser Pro Pro Gln Arg Ala Gln Arg Gly Asp His Ser Ser Arg
```

```
                165                 170                 175

Glu Gln Gly His Ala Pro Gly Gly Thr Ser Gln Ala Arg Gln Ile Asp
            180                 185                 190

Phe Pro Leu Arg Ile Leu Val Pro Thr Gln Phe Val Gly Ala Ile Ile
        195                 200                 205

Gly Lys Glu Gly Leu Thr Ile Lys Asn Ile Thr Lys Gln Thr Gln Ser
    210                 215                 220

Arg Val Asp Ile His Arg Lys Glu Asn Ser Gly Ala Ala Glu Lys Pro
225                 230                 235                 240

Val Thr Ile His Ala Thr Pro Glu Gly Thr Ser Glu Ala Cys Arg Met
                245                 250                 255

Ile Leu Glu Ile Met Gln Lys Glu Ala Asp Glu Thr Lys Leu Ala Glu
            260                 265                 270

Glu Ile Pro Leu Lys Ile Leu Ala His Asn Gly Leu Val Gly Arg Leu
        275                 280                 285

Ile Gly Lys Glu Gly Arg Asn Leu Lys Lys Ile Glu His Glu Thr Gly
    290                 295                 300

Thr Lys Ile Thr Ile Ser Ser Leu Gln Asp Leu Ser Ile Tyr Asn Pro
305                 310                 315                 320

Glu Arg Thr Ile Thr Val Lys Gly Thr Val Glu Ala Cys Ala Ser Ala
                325                 330                 335

Glu Ile Glu Ile Met Lys Lys Leu Arg Glu Ala Phe Glu Asn Asp Met
            340                 345                 350

Leu Ala Val Asn Gln Gln Ala Asn Leu Ile Pro Gly Leu Asn Leu Ser
        355                 360                 365

Ala Leu Gly Ile Phe Ser Thr Gly Leu Ser Val Leu Ser Pro Pro Ala
    370                 375                 380

Gly Pro Arg Gly Ala Pro Pro Ala Ala Pro Tyr His Pro Phe Thr Thr
385                 390                 395                 400

His Ser Gly Tyr Phe Ser Ser Leu Tyr Pro His His Gln Phe Gly Pro
                405                 410                 415

Phe Pro His His His Ser Tyr Pro Glu Gln Glu Ile Val Asn Leu Phe
            420                 425                 430

Ile Pro Thr Gln Ala Val Gly Ala Ile Ile Gly Lys Lys Gly Ala His
        435                 440                 445

Ile Lys Gln Leu Ala Arg Phe Ala Gly Ala Ser Ile Lys Ile Ala Pro
```

```
    450                 455                 460

Ala Glu Gly Pro Asp Val Ser Glu Arg Met Val Ile Ile Thr Gly Pro
465                 470                 475                 480

Pro Glu Ala Gln Phe Lys Ala Gln Gly Arg Ile Phe Gly Lys Leu Lys
                485                 490                 495

Glu Glu Asn Phe Phe Asn Pro Lys Glu Glu Val Lys Leu Glu Ala His
            500                 505                 510

Ile Arg Val Pro Ser Ser Thr Ala Gly Arg Val Ile Gly Lys Gly Gly
        515                 520                 525

Lys Thr Val Asn Glu Leu Gln Asn Leu Thr Ser Ala Glu Val Ile Val
    530                 535                 540

Pro Arg Asp Gln Thr Pro Asp Glu Asn Glu Glu Val Ile Val Arg Ile
545                 550                 555                 560

Ile Gly His Phe Phe Ala Ser Gln Thr Ala Gln Arg Lys Ile Arg Glu
                565                 570                 575

Ile Val Gln Gln Val Lys Gln Gln Glu Gln Lys
            580                 585


<210> 502
<211> 20
<212> PRT
<213> Homo sapiens

<400> 502
Leu Tyr Asn Pro Glu Arg Thr Ile Thr Val Lys Gly Ala Ile Glu Asn
                  5                  10                  15

Cys Cys Arg Ala
             20


<210> 503
<211> 20
<212> PRT
<213> Homo sapiens

<400> 503
Leu Tyr Asn Pro Glu Arg Thr Ile Thr Val Lys Gly Thr Cys Glu Ala
                  5                  10                  15

Cys Ala Ser Ala
             20

<210> 504
<211> 19
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<212> PRT
<213> Homo sapiens

<400> 504
Met Asn Lys Leu Tyr Ile Gly Asn Leu Ser Glu Asn Ala Ala Pro Ser
 1   5   10   15
Asp Leu Glu

<210> 505
<211> 20
<212> PRT
<213> Homo sapiens

<400> 505
Ser Glu Asn Ala Ala Pro Ser Asp Leu Glu Ser Ile Phe Lys Asp Ala
 1   5   10   15
Lys Ile Pro Val
            20

<210> 506
<211> 20
<212> PRT
<213> Homo sapiens

<400> 506
Ser Ile Phe Lys Asp Ala Lys Ile Pro Val Ser Gly Pro Phe Leu Val
 1   5   10   15
Lys Thr Gly Tyr
            20

<210> 507
<211> 20
<212> PRT
<213> Homo sapiens

<400> 507
Ser Gly Pro Phe Leu Val Lys Thr Gly Tyr Ala Phe Val Asp Cys Pro
 1   5   10   15
Asp Glu Ser Trp
            20

<210> 508
<211> 20
<212> PRT
<213> Homo sapiens

<400> 508
Ala Phe Val Asp Cys Pro Asp Glu Ser Trp Ala Leu Lys Ala Ile Glu
 1   5   10   15

Ala Leu Ser Gly
20

<210> 509
<211> 20
<212> PRT
<213> Homo sapiens

<400> 509
Ala Leu Lys Ala Ile Glu Ala Leu Ser Gly Lys Ile Glu Leu His Gly
1 5 10 15
Lys Pro Ile Glu
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<210> 510
<211> 20
<212> PRT
<213> Homo sapiens

<400> 510
Lys Ile Glu Leu His Gly Lys Pro Ile Glu Val Glu His Ser Val Pro
1 5 10 15
Lys Arg Gln Arg
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<210> 511
<211> 20
<212> PRT
<213> Homo sapiens

<400> 511
Val Glu His Ser Val Pro Lys Arg Gln Arg Ile Arg Lys Leu Gln Ile
1 5 10 15
Arg Asn Ile Pro
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<210> 512
<211> 20
<212> PRT
<213> Homo sapiens

<400> 512
Ile Arg Lys Leu Gln Ile Arg Asn Ile Pro Pro His Leu Gln Trp Glu
1 5 10 15
Val Leu Asp Ser
20

<210> 513
<211> 20

<212> PRT
<213> Homo sapiens

<400> 513
Pro His Leu Gln Trp Glu Val Leu Asp Ser Leu Leu Val Gln Tyr Gly
 1   5   10   15
Val Val Glu Ser
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<210> 514
<211> 20
<212> PRT
<213> Homo sapiens

<400> 514
Leu Leu Val Gln Tyr Gly Val Val Glu Ser Cys Glu Gln Val Asn Thr
 1   5   10   15
Asp Ser Glu Thr
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<210> 515
<211> 19
<212> PRT
<213> Homo sapiens

<400> 515
Glu Gln Val Asn Thr Asp Ser Glu Thr Ala Val Val Asn Val Thr Tyr
 1   5   10   15
Ser Ser Lys

<210> 516
<211> 20
<212> PRT
<213> Homo sapiens

<400> 516
Ala Val Val Asn Val Thr Tyr Ser Ser Lys Asp Gln Ala Arg Gln Ala
 1   5   10   15
Leu Asp Lys Leu
            20

<210> 517
<211> 20
<212> PRT
<213> Homo sapiens

<400> 517
Asp Gln Ala Arg Gln Ala Leu Asp Lys Leu Asn Gly Phe Gln Leu Glu
 1   5   10   15

Asn Phe Thr Leu
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<210> 518
<211> 20
<212> PRT
<213> Homo sapiens

<400> 518
Asn Gly Phe Gln Leu Glu Asn Phe Thr Leu Lys Val Ala Tyr Ile Pro
1 5 10 15
Asp Glu Thr Ala
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<210> 519
<211> 20
<212> PRT
<213> Homo sapiens

<400> 519
Lys Val Ala Tyr Ile Pro Asp Glu Thr Ala Ala Gln Gln Asn Pro Leu
1 5 10 15
Gln Gln Pro Arg
20

<210> 520
<211> 20
<212> PRT
<213> Homo sapiens

<400> 520
Ala Gln Gln Asn Pro Leu Gln Gln Pro Arg Gly Arg Arg Gly Leu Gly
1 5 10 15
Gln Arg Gly Ser
20

<210> 521
<211> 20
<212> PRT
<213> Homo sapiens

<400> 521
Gly Arg Arg Gly Leu Gly Gln Arg Gly Ser Ser Arg Gln Gly Ser Pro
1 5 10 15
Gly Ser Val Ser
20

<210> 522
<211> 20

<212> PRT
<213> Homo sapiens

<400> 522
Ser Arg Gln Gly Ser Pro Gly Ser Val Ser Lys Gln Lys Pro Cys Asp
 1   5   10   15
Leu Pro Leu Arg
            20

<210> 523
<211> 20
<212> PRT
<213> Homo sapiens

<400> 523
Lys Gln Lys Pro Cys Asp Leu Pro Leu Arg Leu Leu Val Pro Thr Gln
 1   5   10   15
Phe Val Gly Ala
            20

<210> 524
<211> 20
<212> PRT
<213> Homo sapiens

<400> 524
Leu Leu Val Pro Thr Gln Phe Val Gly Ala Ile Ile Gly Lys Glu Gly
 1   5   10   15
Ala Thr Ile Arg
            20

<210> 525
<211> 20
<212> PRT
<213> Homo sapiens

<400> 525
Ile Ile Gly Lys Glu Gly Ala Thr Ile Arg Asn Ile Thr Lys Gln Thr
 1   5   10   15
Gln Ser Lys Ile
            20

<210> 526
<211> 20
<212> PRT
<213> Homo sapiens

<400> 526
Asn Ile Thr Lys Gln Thr Gln Ser Lys Ile Asp Val His Arg Lys Glu
 1   5   10   15

Asn Ala Gly Ala
20

<210> 527
<211> 20
<212> PRT
<213> Homo sapiens

<400> 527
Asp Val His Arg Lys Glu Asn Ala Gly Ala Ala Glu Lys Ser Ile Thr
1 5 10 15
Ile Leu Ser Thr
20

<210> 528
<211> 20
<212> PRT
<213> Homo sapiens

<400> 528
Ala Glu Lys Ser Ile Thr Ile Leu Ser Thr Pro Glu Gly Thr Ser Ala
1 5 10 15
Ala Cys Lys Ser
20

<210> 529
<211> 20
<212> PRT
<213> Homo sapiens

<400> 529
Pro Glu Gly Thr Ser Ala Ala Cys Lys Ser Ile Leu Glu Ile Met His
1 5 10 15
Lys Glu Ala Gln
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<210> 530
<211> 20
<212> PRT
<213> Homo sapiens

<400> 530
Ile Leu Glu Ile Met His Lys Glu Ala Gln Asp Ile Lys Phe Thr Glu
1 5 10 15
Glu Ile Pro Leu
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<210> 531
<211> 20

<212> PRT
<213> Homo sapiens

<400> 531
Asp Ile Lys Phe Thr Glu Glu Ile Pro Leu Lys Ile Leu Ala His Asn
 1   5   10   15
Asn Phe Val Gly
            20

<210> 532
<211> 20
<212> PRT
<213> Homo sapiens

<400> 532
Lys Ile Leu Ala His Asn Asn Phe Val Gly Arg Leu Ile Gly Lys Glu
 1   5   10   15
Gly Arg Asn Leu
            20

<210> 533
<211> 20
<212> PRT
<213> Homo sapiens

<400> 533
Arg Leu Ile Gly Lys Glu Gly Arg Asn Leu Lys Lys Ile Glu Gln Asp
 1   5   10   15
Thr Asp Thr Lys
            20

<210> 534
<211> 20
<212> PRT
<213> Homo sapiens

<400> 534
Lys Lys Ile Glu Gln Asp Thr Asp Thr Lys Ile Thr Ile Ser Pro Leu
 1   5   10   15
Gln Glu Leu Thr
            20

<210> 535
<211> 20
<212> PRT
<213> Homo sapiens

<400> 535
Ile Thr Ile Ser Pro Leu Gln Glu Leu Thr Leu Tyr Asn Pro Glu Arg
 1   5   10   15

Thr Ile Thr Val
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<210> 536
<211> 20
<212> PRT
<213> Homo sapiens

<400> 536
Leu Tyr Asn Pro Glu Arg Thr Ile Thr Val Lys Gly Asn Val Glu Thr
1 5 10 15
Cys Ala Lys Ala
20

<210> 537
<211> 20
<212> PRT
<213> Homo sapiens

<400> 537
Lys Gly Asn Val Glu Thr Cys Ala Lys Ala Glu Glu Glu Ile Met Lys
1 5 10 15
Lys Ile Arg Glu
20

<210> 538
<211> 20
<212> PRT
<213> Homo sapiens

<400> 538
Glu Glu Glu Ile Met Lys Lys Ile Arg Glu Ser Tyr Glu Asn Asp Ile
1 5 10 15
Ala Ser Met Asn
20

<210> 539
<211> 20
<212> PRT
<213> Homo sapiens

<400> 539
Ser Tyr Glu Asn Asp Ile Ala Ser Met Asn Leu Gln Ala His Leu Ile
1 5 10 15
Pro Gly Leu Asn
20

<210> 540
<211> 20

<212> PRT
<213> Homo sapiens

<400> 540
Leu Gln Ala His Leu Ile Pro Gly Leu Asn Leu Asn Ala Leu Gly Leu
 1   5   10   15
Phe Pro Pro Thr
            20

<210> 541
<211> 20
<212> PRT
<213> Homo sapiens

<400> 541
Leu Asn Ala Leu Gly Leu Phe Pro Pro Thr Ser Gly Met Pro Pro Pro
 1   5   10   15
Thr Ser Gly Pro
            20

<210> 542
<211> 20
<212> PRT
<213> Homo sapiens

<400> 542
Ser Gly Met Pro Pro Pro Thr Ser Gly Pro Pro Ser Ala Met Thr Pro
 1   5   10   15
Pro Tyr Pro Gln
            20

<210> 543
<211> 23
<212> PRT
<213> Homo sapiens

<400> 543
Pro Ser Ala Met Thr Pro Pro Tyr Pro Gln Phe Glu Gln Ser Glu Thr
 1   5   10   15
Glu Thr Val His Leu Phe Ile
            20

<210> 544
<211> 20
<212> PRT
<213> Homo sapiens

<400> 544
Phe Glu Gln Ser Glu Thr Glu Thr Val His Leu Phe Ile Pro Ala Leu
 1   5   10   15

Ser Val Gly Ala
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<210> 545
<211> 20
<212> PRT
<213> Homo sapiens

<400> 545
Leu Phe Ile Pro Ala Leu Ser Val Gly Ala Ile Ile Gly Lys Gln Gly
1 5 10 15
Gln His Ile Lys
20

<210> 546
<211> 20
<212> PRT
<213> Homo sapiens

<400> 546
Ile Ile Gly Lys Gln Gly Gln His Ile Lys Gln Leu Ser Arg Phe Ala
1 5 10 15
Gly Ala Ser Ile
20

<210> 547
<211> 21
<212> PRT
<213> Homo sapiens

<400> 547
Lys Gln Leu Ser Arg Phe Ala Gly Ala Ser Ile Lys Ile Ala Pro Ala
1 5 10 15
Glu Ala Pro Asp Ala
20

<210> 548
<211> 20
<212> PRT
<213> Homo sapiens

<400> 548
Lys Ile Ala Pro Ala Glu Ala Pro Asp Ala Lys Val Arg Met Val Ile
1 5 10 15
Ile Thr Gly Pro
20

<210> 549
<211> 20

<212> PRT
<213> Homo sapiens

<400> 549
Lys Val Arg Met Val Ile Ile Thr Gly Pro Pro Glu Ala Gln Phe Lys
 1   5   10   15
Ala Gln Gly Arg
            20

<210> 550
<211> 20
<212> PRT
<213> Homo sapiens

<400> 550
Pro Glu Ala Gln Phe Lys Ala Gln Gly Arg Ile Tyr Gly Lys Ile Lys
 1   5   10   15
Glu Glu Asn Phe
            20

<210> 551
<211> 20
<212> PRT
<213> Homo sapiens

<400> 551
Ile Tyr Gly Lys Ile Lys Glu Glu Asn Phe Val Ser Pro Lys Glu Glu
 1   5   10   15
Val Lys Leu Glu
            20

<210> 552
<211> 20
<212> PRT
<213> Homo sapiens

<400> 552
Val Ser Pro Lys Glu Glu Val Lys Leu Glu Ala His Ile Arg Val Pro
 1   5   10   15
Ser Phe Ala Ala
            20

<210> 553
<211> 20
<212> PRT
<213> Homo sapiens

<400> 553
Ala His Ile Arg Val Pro Ser Phe Ala Ala Gly Arg Val Ile Gly Lys
 1   5   10   15

Gly Gly Lys Thr
20

<210> 554
<211> 20
<212> PRT
<213> Homo sapiens

<400> 554
Gly Arg Val Ile Gly Lys Gly Gly Lys Thr Val Asn Glu Leu Gln Asn
1 5 10 15
Leu Ser Ser Ala
20

<210> 555
<211> 20
<212> PRT
<213> Homo sapiens

<400> 555
Val Asn Glu Leu Gln Asn Leu Ser Ser Ala Glu Val Val Val Pro Arg
1 5 10 15
Asp Gln Thr Pro
20

<210> 556
<211> 20
<212> PRT
<213> Homo sapiens

<400> 556
Glu Val Val Val Pro Arg Asp Gln Thr Pro Asp Glu Asn Asp Gln Val
1 5 10 15
Val Val Lys Ile
20

<210> 557
<211> 20
<212> PRT
<213> Homo sapiens

<400> 557
Asp Glu Asn Asp Gln Val Val Val Lys Ile Thr Gly His Phe Tyr Ala
1 5 10 15
Cys Gln Val Ala
20

<210> 558
<211> 20

<212> PRT
<213> Homo sapiens

<400> 558
Thr Gly His Phe Tyr Ala Cys Gln Val Ala Gln Arg Lys Ile Gln Glu
 1   5   10   15
Ile Leu Thr Gln
            20

<210> 559
<211> 21
<212> PRT
<213> Homo sapiens

<400> 559
Ala Gln Arg Lys Ile Gln Glu Ile Leu Thr Gln Val Lys Gln His Gln
 1   5   10   15
Gln Gln Lys Ala Leu
            20

<210> 560
<211> 20
<212> PRT
<213> Homo sapiens

<400> 560
Val Lys Gln His Gln Gln Gln Lys Ala Leu Gln Ser Gly Pro Pro Gln
 1   5   10   15
Ser Arg Arg Lys
            20